

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

**PUBLIC HEARING IN CONNECTION WITH THE  
INVESTIGATION OF AIRCRAFT ACCIDENT  
KOREAN AIR  
FLIGHT 801, B-747-300  
AGANA, GUAM  
AUGUST 6, 1997**

Hawaii Convention Center  
Ballroom A, B and C  
1833 Kalakaua Avenue  
Honolulu, Hawaii 96815

Wednesday, March 25, 1998  
9:00 a.m.

Chairman, Board of Inquiry

THE HONORABLE ROBERT T. FRANCIS

Board of Inquiry

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Safety Affairs  
Office of Aviation Safety

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Chief, Operational Factors Division  
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Investigator-in-Charge

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Operational Factors Investigator

MALCOLM BRENNER  
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Airport Crash/Fire/Rescue Investigator

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Harold Donner, Spokesman

BOEING COMMERCIAL AIRPLANE GROUP  
Kevin Darcy, Spokesman

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Captain Sang Rok, Kim, Spokesman  
First Officer Steven Chung, Official  
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BARTON ATC INTERNATIONAL, INC.  
Edward Montgomery, Spokesman

GOVERNMENT OF GUAM  
Ron Dervish, Spokesman

## A G E N D A

AGENDA ITEMPAGE:

Calling of Witnesses, Witnesses Sworn and  
Qualified by the Hearing Officer, and Witness  
Questioning

Captain Lee, Jung Taek 271  
Flight Crew Operation  
Korean Air  
Seoul, Korea

Afternoon Session

Continuation of Witness Questioning

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Director, Academic Flight Training  
Korean Air  
Seoul, Korea

Captain Park, Pyung-Woo 363  
Deputy Director, Flight Operations  
Korean Air  
Seoul, Korea

Juan Rosario 407  
Director  
Guam Civil Defense  
Agana, Guam

Ciriaco C. Sanchez 442  
Deputy Fire Chief  
Guam Fire Department  
Agana, Guam

Joseph Mafnas 485  
Deputy Chief of Police  
Guam Police Department  
Agana, Guam

Captain Mary Humphreys-Sprague 493  
Inspector General  
U.S. Navy  
Southern Command  
Miami, Florida



1 P R O C E E D I N G S

2 9:00 a.m.

3 CHAIRMAN FRANCIS: Could we get everyone to  
4 sit down, please, and we'll get started?

5 (Pause)

6 CHAIRMAN FRANCIS: Our next witness starting  
7 out this morning will be Captain Lee, flight operation  
8 -- flight -- flight crew operation of Korea Air.  
9 Whereupon,

10 CAPTAIN LEE, JUNG TAEK  
11 was called as a witness, and first having been duly  
12 sworn, was examined and testified as follows:

13 TESTIMONY OF

14 CAPTAIN LEE, JUNG TAEK

15 FLIGHT CREW OPERATION

16 KOREAN AIR

17 SEOUL, KOREA

18 MR. SCHLEDE: Captain Lee, please state your  
19 full name and business address for the record?

20 (Captain Lee's responses in Korean are  
21 transcribed herein verbatim from the English  
22 translation.)

23 THE WITNESS: Yes, my name is Jung Taek Lee,  
24 and my business address is Korean Air Building located  
25 at -- Seoul, Korea.

1           MR. SCHLEEDE: And what is your present  
2 position with Korean Air?

3           THE WITNESS: I am currently a pilot at the  
4 Korean Air for Boeing 747 Classic, and also, I am a  
5 pilot instructor, SLS -- for chief pilot, the highest  
6 ranking -- third-level highest ranking -- pilot.

7           MR. SCHLEEDE: Thank you very much. Captain  
8 Misencik will begin the questioning.

9           CAPTAIN MISENCIK: Good morning, Captain Lee.

10          THE WITNESS: Good morning.

11          CAPTAIN MISENCIK: How long have you been a  
12 -- with Korean Airlines, sir?

13          THE WITNESS: I have been working for Korean  
14 Air starting May 1985.

15          CAPTAIN MISENCIK: How long have you been an  
16 instructor with Korean Air on the 747?

17          THE WITNESS: I was first appointed to the  
18 position of instructor pilot for Boeing 747 in April  
19 1996.

20          CAPTAIN MISENCIK: Are you qualified to  
21 instruct both on the airplane and on the simulator?

22          THE WITNESS: Let me start. Generally  
23 speaking or as a matter of principle, instructor pilot  
24 is qualified to teach both simulator and the actual  
25 aircraft. However -- however, in the case of Boeing

1 747 Classic simulation instruction is sourced out to  
2 contractors. They -- they are dedicated instructors  
3 hired from outside. And in-house instructor pilots  
4 handle aircraft instruction.

5 CAPTAIN MISENCIK: How often do you instruct  
6 in the simulator?

7 THE WITNESS: I believe it's less than five  
8 times a year simulator training.

9 CAPTAIN MISENCIK: What are your duties as a  
10 instructor in the airplane? What do you mostly do as a  
11 instructor?

12 THE WITNESS: The duties of an instructor  
13 pilot is to train pilots assigned to me, for example,  
14 for simulator and actual aircraft instruction.

15 (Pause)

16 THE WITNESS: Okay. The interpreter  
17 interjection was to clarify one technical term, which -  
18 - which was answered as examiner pilot.

19 Part of my duty -- additional duties is to  
20 refer the pilot who has completed the training to the  
21 examiner pilot.

22 CAPTAIN MISENCIK: During your experience as  
23 a simulator and aircraft instructor, what percentage of  
24 these training events are observed by the KCAB?

1           THE WITNESS: Let me first tell you about the  
2 case of the simulator training. First of all, we are  
3 not doing a whole lot of simulator training while I was  
4 in charge of that responsibility. I -- I do not have  
5 any recollection of the inspection on the part of the  
6 KCAB.

7           So, let me go on to answer with respect to  
8 aircraft training. I did receive spot checks from KCAB  
9 or a spot check from KCAB.

10          CAPTAIN MISENCIK: Do you have a recollection  
11 for what percentage of your airplane rides were  
12 observed by the KCAB?

13          THE WITNESS: Well, sitting here off the top  
14 of my head I can't recall the precise percentages.  
15 However, let me try to give you as best answer as I  
16 can. However, according to my personal recollection I  
17 received about three to four checks each year.

18          CAPTAIN MISENCIK: Captain Lee, are you aware  
19 if the -- any of the KCAB inspectors that oversee  
20 Korean Air are type-rated on the 747 Classic and are  
21 current?

22          THE WITNESS: Yes, I do. My understanding is  
23 that there are two of them at KCAB.

24          CAPTAIN MISENCIK: Two -- you say two  
25 instruct -- inspectors that are current and qualified

1 on the 747 Classic? Is that what you said?

2 THE WITNESS: I want to double check my --  
3 the question. The way I heard it was that whether  
4 there were -- there are two inspectors with the KCAB  
5 who holds 7247 -- 747 type-rating. Is that correct?

6 CAPTAIN MISENCIK: Yes. Are they -- are the  
7 KCAB examiners or the KCAB inspectors current and  
8 qualified on 747 Classic airplanes? The -- the  
9 examiners or inspectors that oversee Korean Airlines or  
10 Korean Air, I'm sorry.

11 THE WITNESS: I do not know as to what type  
12 of type-ratings they may have.

13 CAPTAIN MISENCIK: Okay. Captain Lee,  
14 discussing briefings and checklists now, are approach  
15 briefings required by Korean Air in all circumstances?

16 THE WITNESS: Yes, approach briefing is to be  
17 done under any -- in any cases. It's an absolute must.

18 CAPTAIN MISENCIK: What is Korean Air's goal  
19 in requiring an approach briefing? What is the intent?  
20 I'll further clarify. Which approach is required to  
21 be briefed upon arrival at -- at an airport?

22 THE WITNESS: Approach briefing is absolutely  
23 necessary for the sake of safe landing of an aircraft.

24 In addition, a pilot must have constantly watch out on  
25 the weather conditions and the traffic conditions at

1 the destination airport. In addition, a pilot must  
2 also keep it under consideration that in case the  
3 situation at the destination airport becomes so bad  
4 that wouldn't allow safe landing. Hence, as a result,  
5 a diversion or deviation may be necessary. The pilot  
6 must also carefully review airport's approach charts.

7 The pilot must also have a detailed  
8 discussion as to division of labor or division of  
9 business responsibilities for -- with respect to  
10 approach as well as landing. The approach briefing  
11 should be done prior to TOB briefing.

12 INTERPRETER: I'm sorry. Interpreter  
13 interjection. Let me correct my mistranslation. Not  
14 TOB but TOD.

15 THE WITNESS: In doing so, the underlying  
16 intention of these efforts are to ensure safe landing  
17 of the aircraft.

18 Let me tell you some specifics of the  
19 approach briefing that we practice. We receive  
20 information based on ATIS, A-T-I-S, and NOTAMS that we  
21 receive from the destination airport. We check,  
22 review, and conduct briefing as to the expected  
23 approach methods based on the A-T-I-S information that  
24 we receive from the destination airport. That's all.

1           CAPTAIN MISENCIK:  If a pilot anticipates a  
2   visual approach, what approach briefing would he give  
3   if the ATIS, A-T-I-S, indicates a -- an instrument  
4   approach is the approach in use?

5           THE WITNESS:  A pilot is supposed to review  
6   and have a briefing of the information from the A-T-I-  
7   S.

8           CAPTAIN MISENCIK:  -- referring to Exhibit  
9   2N, 2 November.  If we could put that on the screen?

10          Captain Lee, if you could -- this is the  
11   approach for ILS runway 6-left that was in effect on  
12   August the 6th, 1997.  If you could indicate to us what  
13   a -- a briefing for an approach ILS 6-left localizer,  
14   glide slope out of service would -- would be like  
15   according to Korean Air procedures, please?

16          THE WITNESS:  This can be kind of a complex  
17   answer, so let me give you one segment -- let me give  
18   an answer segment by segment about the landing  
19   briefing.

20          First of all, we put in front of us the  
21   expected approach briefing charts and open it.  In the  
22   other hand we hold this landing briefing card inside  
23   the cockpit as shown on this overhead projector  
24   transparency picture.  Briefing is done when all the  
25   rest of the crew are in a position to concentrate on

1     that.

2             Let me give you an example of briefing.

3     Number one, weather.  You'll see here A-T-I-S uniform  
4     coming up.  Wind calm, visibility seven miles,  
5     scattered 1600, temperature 27, altimeter 296 -- 29 --  
6     2986, glide slope out of service.

7             Number two, star.  As to TOD, the current  
8     altitude is 41,000, so we'll start descending 17  
9     minutes before the airport.  Number one and number two,  
10    Nimitz VOR indicates 11.3 -- oh, let me -- 115.3.  
11    There is no particular altitude speed restriction.  
12    There isn't any arrival route.

13            Number three, using runway, type of approach,  
14    type of transition.  Using runway indicates 6-left.  
15    Type of approach is localized approach.  The transition  
16    level indicates 180.

17            Number four, review of instrument approach  
18    procedure.  Here we perform briefing of the applicable  
19    chart -- chart.  The airport name is Agana Airport.  
20    Chart number 11-1.  Issue date August 2, 1997.  The  
21    effective date is August 15.  Minimum safe altitude is  
22    2200 feet.  Airport elevation is 279 feet.  This chart  
23    is a DME requirement chart.  DME can be -- the DME is  
24    acquired or emanating from Nimitz VOR.  It is a type of  
25    arc approach.  The initial approach fix hammer, seven,



1 DME. It is a seven-mile arc.

2 When the 259 radar is ~~passed~~ from Nimitz VOR,  
3 number one, ascends 110.3 to the localized brief.  
4 Number three and number -- number -- number one and  
5 number two are both sets course 603.

6 Let me tell you a little bit about the  
7 current profile. 2600 feet maintained until the arc is  
8 drawn. 2000 feet up to final approach six or 1.6 DME.  
9 1440 feet up to VOR air space or a sky. 2.8 DME for  
10 missed approach point. 256 feet with respect to the  
11 elevation prior to touchdown.

12 Missed approach procedure is climb to 2600,  
13 turn right via Nimitz VOR, radio 242 to Flake. And  
14 hold -- hold to southwest. Right turn. 062 in-bound.  
15 MDA is 560 feet. Time to map is one minute 50 seconds  
16 to the final approach fix point.

17 In -- in the event of a missed approach --  
18 let me come back to that issue later on. Instead, let  
19 me go on to number five, crew's action and call out.

20 PNF call fixable altitude --

21 INTERPRETER: interpreter interjection. Let  
22 me retranslate it. PNF, please call fixed altitude.

23 THE WITNESS: Call DME as well. When missed  
24 approach is performed I'm going to call a call-around  
25 call and flap 20 call. Flight engineer, please set

1 thrust to go around. PNF, please set to flap 20. When  
2 positive climb, landing gear up by order. By order set  
3 IES -- I'm sorry. Let me correct my mistranslation.  
4 IAS.

5 After you go up to 2600 feet, set right turn  
6 heading to 270. Also set number one localizer  
7 frequency to VOR as well. Go to Flake and execute  
8 parallel entry. If there is any deviation whatsoever  
9 during approach, please advise me.

10 Number six, parking spot and taxiways. I'll  
11 do re-briefing upon receiving any relevant information.

12 Number seven, other abnormal conditions and  
13 configurations. If any abnormalities should take place  
14 during flight, then whoever spots it first advise me,  
15 please. I'll take action based on the checklist. Are  
16 there any questions? That's all.

17 CAPTAIN MISENCIK: Thank you, Captain, for  
18 the sample briefing. What you described to us, is that  
19 a standard briefing according to Korean Air procedures  
20 that you could expect every crew to perform?

21 THE WITNESS: This is the standard briefing  
22 that we teach.

23 CAPTAIN MISENCIK: When you mentioned the --  
24 the time for the missed -- for the missed approach to  
25 the missed approach point, when the missed approach

1 point is based on DME as it is on this particular  
2 approach we were talking about, would you expect the  
3 flight crew to still time the -- the final approach  
4 segment?

5 THE WITNESS: From final approach point to  
6 missed approach point the primary is 2.8 DME and the  
7 time is based on the ground speed as shown down below,  
8 one minute and 53 seconds.

9 CAPTAIN MISENCIK: In this case, would you  
10 expect the flight crew to also start a timer to time  
11 the -- the final segment?

12 THE WITNESS: Timing starts at the point of  
13 passing the final approach point.

14 (Pause)

15 FIRST OFFICER CHUNG: We'd like to clarify  
16 the question to Mr. -- to Captain Lee, with your  
17 permission, Mr. Chairman.

18 (First Officer Chung spoke to Captain Lee in  
19 Korean.)

20 THE WITNESS: I'm sorry. I misunderstood the  
21 question. Yes, timing has to be done.

22 CAPTAIN MISENCIK: During the approach  
23 briefing, checking the dates and currency of the  
24 approach plates, is that standard procedure at Korean  
25 Air?

1 THE WITNESS: Yes, that's the case.

2 CAPTAIN MISENCIK: Captain Lee, non-precision  
3 approaches, are they normally hand-flown or flown using  
4 the autopilot?

5 THE WITNESS: It is entirely up to the  
6 judgment of the instructor pilot whether either hand-  
7 fly -- hand-flying or autopilot mode is to be used.  
8 However, in the initial period of flight for the sake  
9 of flight control -- better control, manual flying mode  
10 is more frequently practiced. That is for the initial  
11 phase of the training process. For the later stage of  
12 the training process auto -- the autopilot mode is more  
13 frequently instructed.

14 When manual flight is being executed, it  
15 starts from under altitude 10,000 feet. When the  
16 weather condition is IMC, then the autopilot's mode is  
17 suggested -- recommended. The use of autopilot  
18 indicates a non-precision. It's limited to MDA only.  
19 That's all.

20 CAPTAIN MISENCIK: Do Korean Air procedures  
21 require that the correct navigation frequency is tuned  
22 and identified?

23 THE WITNESS: Yes, it is a requirement, and  
24 that's the responsibilities of all the crews -- all the  
25 crew involved.

1           CAPTAIN MISENCIK:  What is Korean Air policy  
2   regarding reading back clearances?  As in the case of  
3   Flight 801, would Korean Air policy require the crew to  
4   read back "glide slope unusable"?

5           (The following conversation between Captain  
6   Lee and the interpreter took place partly in English  
7   and partly in Korean.)

8           INTERPRETER:  -- take over landing -- take  
9   over --

10          CAPTAIN LEE:  Take off.

11          INTERPRETER:  Oh, take off --

12          CAPTAIN LEE:  Take off clearance landing,  
13   clearance runway, cross clearance.

14          (Pause)

15          INTERPRETER:  Why don't you please -- court  
16   reporter, why don't you take it directly from the  
17   witness?

18          CAPTAIN LEE:  Genuine clearance or suitable  
19   clearance --

20          INTERPRETER:  Assuming that the court  
21   reporter typed the first part, the important clearance  
22   has to be done in terms of numerical representation.

23          (Resumption of translation)

24          THE WITNESS:  Especially the important  
25   clearance, especially that involved the number --

1 numerical numbers that you have to read back.  
2 Involving take-off clearance, you must read back. And  
3 also, the -- the clearance that involved the numbers  
4 you must read back. And also, the others that -- the  
5 requirement by ATC you must read back fully. But also,  
6 when we receive the clearance and we are not sure  
7 expecting the controller going to give us the  
8 confirmation we instruct our pilots to read back as you  
9 heard.

10 In case of Korean Airline 801 in clearance  
11 the "glide slope unusable" is the additional  
12 information. In general, if you knew this additional  
13 information you don't need to read back. But in this  
14 case -- in this case it's after the -- there's  
15 additional information or not, the read-back could be  
16 really different. In other words, this is very  
17 important information. In this case, in order to  
18 confirm you like to read back -- you must read back.  
19 That's all.

20 CAPTAIN MISENCIK: Captain Lee, what is  
21 Korean Air policy regarding a pilot following a  
22 navigational indication that has been reported  
23 inoperative or unusable? How should a pilot regard a  
24 glide slope indication that may appear normal to him  
25 but has been reported unusable or inoperative?

1           THE WITNESS: If he received this information  
2 of "glide slope unusable," then he must not use the --  
3 that instrument or that -- that glide slope.

4           CAPTAIN MISENICK: Captain Lee, in non-  
5 precision approaches, is it Korean Air policy to use  
6 step-downs or a constant descent for the approach?

7           THE WITNESS: Basically, we are teaching them  
8 to use a step-down method. But when the weather  
9 condition is BMC and also pilot -- when pilot select  
10 the medial -- medium altimeters -- altitude and also in  
11 the condition that he or she will maintain the above  
12 the altitude he might choose the constant lower-down  
13 for the passengers' sakes. But what we emphasize is he  
14 must maintain the -- the chart-depicted altitude. That  
15 -- that's all.

16          CAPTAIN MISENICK: Are there specific  
17 training scenarios for constant descent approaches?

18                   (Pause)

19          THE WITNESS: Could you repeat the question  
20 again, please?

21          CAPTAIN MISENICK: Yes. Are there training  
22 scenarios or profiles in the simulator which teach  
23 constant descent technique?

24          THE WITNESS: As I said earlier that  
25 basically the -- the training is -- that basically when

1 we training we teach them to step down.

2 CAPTAIN MISENCIK: Captain Lee has Korean  
3 Air considered the monitored approach technique for  
4 instrument approaches?

5 THE WITNESS: We were introduced to this  
6 monitored approach method but we didn't take that as  
7 our approach method. We decide the PF is choose the  
8 approach and landing. But all -- PIC can take over the  
9 any time in this -- during this period -- period for  
10 the safety. That -- that's all.

11 CAPTAIN MISENCIK: During flight checks,  
12 check rides, and other evaluations, are the PNF and the  
13 flight engineer also being evaluated?

14 THE WITNESS: Yes, in case of the simulator  
15 they are evaluated at the same time. But when it's in  
16 the airplane check it's up to their individual schedule  
17 they are evaluated officially. But also, that means  
18 the PNF or flight engineering is be evaluated or  
19 checked by second-handedly. That's -- that's all.

20 CAPTAIN MISENCIK: During check rides are  
21 pilots evaluated for their approach briefings?

22 THE WITNESS: Yes, they're evaluated.

23 CAPTAIN MISENCIK: Captain Lee, in training  
24 could you describe the roles of the PF and the PNF  
25 during a non-precision approach both with autopilot on



1 and autopilot off, what their specific duties are  
2 according to Korean Air procedures?

3 THE WITNESS: I will tell you the -- the  
4 first -- the autopilot on, in case of autopilot on.  
5 PF's supposed to control -- take over all the --  
6 control by himself -- I mean for himself. But some  
7 part of it he can order to PNF. A PNF supposed to  
8 implemented the ordered the job. But the rest of the  
9 crew who doesn't hold the control switch or who doesn't  
10 touch the control switch or the -- nothing to do with  
11 airplane flight, then they supposed to monitor.

12 Then I'll tell you the autopilot off. PF  
13 basically ordered all the related matters. PNF  
14 supposed to implemented all the ordered -- ordered  
15 matters. And also, PNF's supposed to advise PF if  
16 there's a -- a certain matter that's skipped by PF.  
17 That's it.

18 CAPTAIN MISENCIK: Which pilot states or sets  
19 the next step-down altitude in a non-precision  
20 approach?

21 THE WITNESS: In the case of autopilot on,  
22 PF's supposed to do it. But when it's autopilot off  
23 then by the PF's order, PNF's supposed to do it. But  
24 also, I mentioned earlier that even though in case of  
25 autopilot on a PF can order the PNF. That's it.

1 CAPTAIN MISENCIK: What is the procedure for  
2 using the altitude-select window for step-downs in a  
3 non-precision approach?

4 THE WITNESS: Your question regarding only  
5 the altitude window or --

6 CAPTAIN MISENCIK: The altitude select, A-L-T  
7 S-E-L window selecting the altitude.

8 THE WITNESS: In case of descending I will  
9 tell you. PF set not only the altitude window but also  
10 set the altitude regarding the information that he  
11 received from A-T-I-S.

12 I'm sorry. There's a misinterpretation. I'm  
13 not sure I got this one right or not, but PF set the  
14 altitude above the altitude that he received in window.  
15 I'm sorry. I think I -- I --

16 PF's supposed to set the altitude that he  
17 received from the clearance above altitude window.

18 CHAIRMAN FRANCIS: -- clarification?

19 FIRST OFFICER CHUNG: Yes, the -- the cleared  
20 altitude from the air traffic control will be set in  
21 the window. It should be translated in the window, not  
22 above the window, obviously. The cleared altitude is  
23 set in the altitude select window.

24 CHAIRMAN FRANCIS: All right.

1 (Resumption of translation)

2 THE WITNESS: And just before descending PF's  
3 supposed to set the altitude mode to S-E-L mode. S-E-L  
4 -- which mode?

5 (Pause)

6 THE WITNESS: PF's supposed to set the  
7 altitude to -- altitude just before descending S-E-L  
8 position mode. Then he's supposed to put the speed to  
9 the VS mode -- VS position mode. And then he turned  
10 the VF control knob to "strengthen." When its altitude  
11 is caught he is supposed to change to altitude hold  
12 mode. Then he's supposed to pre-set the altitude that  
13 indicated the chart -- the next -- next step. That's  
14 it.

15 CHAIRMAN FRANCIS: I think we've got another  
16 request for clarification here from KAL.

17 FIRST OFFICER CHUNG: Rather than a point-by-  
18 point clarification, may we have your ruling at this  
19 point to intervene somehow to clarify the translation  
20 process on these critical matters? I'm afraid we're  
21 getting the wrong impression from the people present as  
22 to what Captain Lee's saying. He's -- we're having a  
23 lot of difficulty at this time.

24 CHAIRMAN FRANCIS: That's all right with me.  
25 Does anyone have a problem with that? Paul, is that

1 all right with you?

2 CAPTAIN MISENCIK: That's all right.

3 CHAIRMAN FRANCIS: I mean the purpose of this  
4 is to -- is to get a clear explanation, so whatever we  
5 have to do to do that we'll -- we'll do.

6 FIRST OFFICER CHUNG: I'll clarify for the  
7 record. Speaking for Korean Airlines, First Officer  
8 Steve Chung. And at this point I would like to --  
9 unless anyone objects at any particular point, I'll go  
10 ahead and translate for Captain Lee. Thank you.

11 (Pause)

12 CHAIRMAN FRANCIS: All right. We're just --  
13 we're a little concerned about the official record here  
14 and how this will work. I -- I guess I would say that  
15 -- that I'm with that in that we will have the ability  
16 ultimately to go back in the original Korean and -- and  
17 reexamine the -- the translation that's being done by  
18 you. So, let's -- we will go ahead and allow this but  
19 with the understanding that the official record will be  
20 subject to -- to clarification.

21 FIRST OFFICER CHUNG: Mr. Chairman, thank  
22 you. We would insist upon that as well that after the  
23 Board hearing that all translation matters be checked  
24 as to the clarity and accurate translation on -- on our  
25 behalf.

1 (Pause)

2 CHAIRMAN FRANCIS: Alright. Let's go ahead  
3 then and -- and do it that way for -- and we'll see how  
4 it works here.

5 FIRST OFFICER CHUNG: Thank you.

6 CHAIRMAN FRANCIS: I think this may  
7 facilitate.

8 FIRST OFFICER CHUNG: Thank you for your  
9 consideration.

10 (First Officer Chung of the Korean Air  
11 Company, Limited translated both questions posed in  
12 English to Korean and Captain Lee's responses in Korean  
13 to English.)

14 CAPTAIN MISENCIK: Okay. I'll state the  
15 question one more time, then. During a non-precision  
16 approach, what would be the procedure for setting the  
17 altitudes in the altitude select window?

18 THE WITNESS: To start from the beginning  
19 again, the cleared altitude clearance from the air  
20 traffic control will be set in the altitude window to  
21 begin with. The pilot flying will set the next  
22 altitude into the altitude select window just prior to  
23 descent to the next altitude.

24 Forgive me, he would set the altitude  
25 selector switch into the -- "select" position. He

1 would set the VS mode switch on the VS mode. Using the  
2 vertical speed control knob he would start -- initiate  
3 the descent. Once the selected altitude is captured he  
4 would select altitude -- "altitude hold." After this  
5 process, he can set the next altitude on the chart.  
6 And that's -- that's it.

7 CAPTAIN MISENCIK: Would the pilot flying on  
8 a non-precision approach expect the altitude warning  
9 light and chime to remind him of the step downs?

10 FIRST OFFICER CHUNG: Would you repeat that  
11 question one more time, please?

12 CAPTAIN MISENCIK: Sure. Would the pilot  
13 flying a non-precision approach expect the -- the light  
14 and the chime on the altitude warning to remind him of  
15 the step-downs?

16 THE WITNESS: That's correct. The pilot  
17 flying would expect that.

18 CAPTAIN MISENCIK: During the non-precision  
19 approach, what mode -- this is only for a non-precision  
20 approach -- what mode is normally set on the autopilot  
21 flight -- flight director mode selector?

22 THE WITNESS: Would you repeat the question,  
23 please?

24 CAPTAIN MISENCIK: During a non-precision  
25 approach -- that would be NDB, POR, or localizer

1 approach -- what mode is normally selected on the  
2 flight director?

3 THE WITNESS: Are you referring to the flight  
4 director modes on the 747 Classic or the navigation  
5 selector switch?

6 CAPTAIN MISENCIK: I'm -- I'm referring to  
7 the -- the flight director modes that would provide  
8 guidance to the command bars.

9 THE WITNESS: The captain would use the mode  
10 A and the first officer position would use B mode on  
11 the flight director switches.

12 CAPTAIN MISENCIK: Okay. I'd like to  
13 clarify. Would he use for the flight director "heading  
14 VOR Loc ILS land"?

15 THE WITNESS: Now I understand. That is the  
16 navigation mode. For the NDV approach he would select  
17 the "heading" mode. For either the VOR or the  
18 localizer approach he would select the VOR Loc mode.

19 CHAIRMAN FRANCIS: Okay. Could I just make a  
20 comment here? This -- this is a very obviously  
21 important part of this hearing, and I want to make sure  
22 that everyone, the questioner, the interpreter, and the  
23 witness are -- are clear about the questions and the  
24 answers. And if we need to repeat this several times  
25 in order to ensure clarity we will, but -- but please

1 let's make certain that we don't go away from any  
2 question or any issue without everyone being totally  
3 comfortable with what's being said.

4 THE WITNESS: For the NDB approach he would  
5 use the "heading" mode. For the VOR or the localizer  
6 approaches he would use the VOR Loc mode. That's --  
7 that's the answer.

8 CAPTAIN MISENCIK: On a full ILS what mode --  
9 what navigation mode would be selected?

10 THE WITNESS: For the ILS approach he would  
11 select the ILS mode on the mode selector switch. For  
12 an auto-land, he would select the "land" mode on the  
13 nav switch.

14 CAPTAIN MISENCIK: Thank you for the  
15 clarification on that.

16 (Pause)

17 CHAIRMAN FRANCIS: Paul, are -- are we clear  
18 on ILS without glide slope?

19 CAPTAIN MISENCIK: Yes. Yeah, we are.

20 CHAIRMAN FRANCIS: Okay.

21 CAPTAIN MISENCIK: At least I am.

22 CHAIRMAN FRANCIS: If you are we're happy.

23 CAPTAIN MISENCIK: Okay.

24 What are the required pilot responses to  
25 mechanical alerts from the GPWS?



1           THE WITNESS: There are two alerts, two  
2 different types of alerts to the GPWS. First, for the  
3 pull-up I will tell you. He would disengage both the  
4 autopilot and the auto-throttle. He would increase  
5 thrust to the maximum setting and raise pitch to the 20  
6 degree climb position. He would not change the  
7 aircraft configuration as to the landing gear or the  
8 flap setting. The radio altimeter would be revert to  
9       -- to ascertain terrain clearance. Once terrain has  
10 been confirmed to be cleared he would lower the nose to  
11 increase air speed.

12           For the GPWS alerts I will tell you about  
13 that next. The sink rate terrain to low gear to low  
14 flaps, glide slope. For these alerts as -- as a -- as  
15 a recall action the pilot is supposed to change the  
16 flight path or the configuration to make sure the alert  
17 warning sound disappears. That would be it.

18           CAPTAIN MISENCIK: What rate of descent is  
19 normally used on the 747 Classic during step-downs, and  
20 how is it set?

21           THE WITNESS: Basically, the rate of descent  
22 would change when the descent gradient changes. It  
23 would be about 300 foot per nautical mile, maximum of  
24 400 feet per nautical mile. In terms of vertical  
25 speed, on the average of 1000 foot per minute, maximum

1 of 1200 foot per minute. That's all.

2 CAPTAIN MISENCIK: Going back to the  
3 mechanical GPS call-outs, what would be the pilot  
4 response for sink rate call-out?

5 THE WITNESS: As a recall action the pilot  
6 should correct the flight path angle to see to it that  
7 the warning disappears.

8 CAPTAIN MISENCIK: Can either pilot call for  
9 a go-around on approach?

10 THE WITNESS: Anyone can advise as to go-  
11 around.

12 CAPTAIN MISENCIK: But if I understood your  
13 previous question, the PIC makes the final decision.  
14 Is that correct?

15 THE WITNESS: That's correct. You're  
16 correct.

17 CAPTAIN MISENCIK: According to Korean Air  
18 procedures, what circumstances would -- require a go-  
19 around on a non-precision approach?

20 THE WITNESS: First, assuming the aircraft  
21 does at the MDA and at the missed approach point there  
22 is no visual to the runway, he would perform go-around.  
23 Secondly, below 500 feet in the case of an instrument  
24 failure he would perform a go-around. Thirdly, at any  
25 time the pilot feels that it is in the interest of

1 safety he can perform a go-around at any time. That's  
2 all.

3 CAPTAIN MISENCIK: Captain Lee, do you have  
4 knowledge of how many of Korean Air approaches in line  
5 operations are non-precision approaches?

6 THE WITNESS: Would you repeat the question,  
7 please?

8 CAPTAIN MISENCIK: Do you have knowledge of  
9 how many approaches in normal line operations at Korean  
10 Air are non-precision approaches?

11 THE WITNESS: At the home base of -- of Seoul  
12 Kimpo Airport we always use -- I correct that  
13 statement. We often use non-precision approaches. At  
14 domestic airports of -- in particular Chachu (ph)  
15 Airport we also use the non-precision approaches. The  
16 747 Classic has many destination airports in Southeast  
17 Asia or Middle Eastern countries. In these areas it's  
18 quite often we see non-precision approaches. Finished.

19 CAPTAIN MISENCIK: On the non-precision  
20 approaches that you see in route qualifications and --  
21 and IOE, what percentage of the airports have the --  
22 would you estimate have the DME and the VOR not located  
23 on the airport?

24 THE WITNESS: I don't believe I can give you  
25 a percentage figure. However, the 747 Classic at

1 Korean Air, we have about 30 destination airports. I  
2 would say over half the airports the -- the VOR DME is  
3 not co-located with the field. That's all.

4 CAPTAIN MISENCIK: One question referring to  
5 a go-around. On a normal go-around, what pitch do the  
6 pilots normally rotate to on a -- on a missed approach  
7 or on a go-around?

8 THE WITNESS: For a normal go-around,  
9 initially you'd raise the pitch to 12 degrees. After  
10 landing gear is up, you would adjust the pitch to  
11 maintain V2 speed plus 10 knots.

12 CAPTAIN MISENCIK: Captain Lee, based on your  
13 review of all the exhibits, including the CVR  
14 transcript and the flight data recorder read-outs, what  
15 is your assessment of the crew performance relative to  
16 Korean Air training, the policy, and -- and the  
17 procedures?

18 CHAIRMAN FRANCIS: Let's make sure -- very  
19 sure that this is properly understood.

20 FIRST OFFICER CHUNG: May I have another  
21 opportunity to translate that? Would you repeat the  
22 question for the translator, Mr. Misencik?

23 CAPTAIN MISENCIK: Sure. Based on the review  
24 of all the exhibits, including the CVR and flight data  
25 recorder read-outs, what is your assessment of the

1 accident crew's performance relative to Korean Air  
2 training and procedures?

3 THE WITNESS: What I felt -- what I perceived  
4 from the CVR contents, I feel that CVR contents cannot  
5 possibly ascertain the entire crew action of the flight  
6 crew. We don't necessarily give credit to these  
7 things, but there's also body language involved. Of  
8 course, this is not part of our procedure. I would,  
9 however, like to emphasize that just based on what's  
10 contained in the CVR we cannot draw crew performance  
11 evaluations just on the CVR contents.

12 Anyway, what I felt overall was that the  
13 accident crew's standard call-out compliance was less  
14 than what I -- what we are taught. That suffices an  
15 answer.

16 CAPTAIN MISENCIK: Captain Lee, what changes  
17 have been made or are being discussed to be -- or being  
18 discussed in the training procedures as a result of  
19 this accident?

20 THE WITNESS: Since the 801 accident is still  
21 under investigation I would not want to make comments  
22 about the analysis. But based on the CVR and the DFTR  
23 results up to now we have implemented many changes  
24 since the accident. First, about simulator training,  
25 we -- we emphasize the use of TKAS, GPWS, and localizer

1 procedures.

2 Also, we -- secondly, we -- we emphasize  
3 standard call-outs. We have made sure that pilot  
4 flying will call out -- the pilot flying will call out  
5 all actions that he's carrying out. The pilot not  
6 flying will aggressively make all necessary advice.  
7 And after second advice, if there is no response that  
8 he would aggressively take over controls.

9 We have diversified the simulator training  
10 profile into three different categories. This is in  
11 regard to the simulator check profile. This gives the  
12 evaluator pilot the option to select any of the three  
13 scenarios at his option and -- would you repeat the  
14 end? And this is one way that we fortify the check  
15 process. That's all.

16 CAPTAIN MISENCIK: Okay. Thank you, Captain  
17 Lee. I think Dr. Brenner has some additional  
18 questions.

19 DR. BRENNER: Captain Lee, in 1989 Korean Air  
20 experienced an accident involving a DC 10 airplane at  
21 Tripoli, Libya in which the airplane landed short of  
22 the runway in fog conditions. Did the company make any  
23 safety changes as a result of this accident?

24 THE WITNESS: At that time I was a first  
25 officer on the MD 82. From my position I don't think I

1     -- I do not know what changes specifically took place  
2     as a result of the accident that you talk about. I do  
3     not want to say that Korean Air did not make any  
4     changes as a result of the accident. It's just that I  
5     do not know from my position at the time.

6             DR. BRENNER: Do you use the radio altimeter  
7     for category one or better approaches?

8             THE WITNESS: Would you specify what you mean  
9     by above category one approach -- category one or  
10    better?

11            DR. BRENNER: Category one visibility or  
12    better visibility.

13            THE WITNESS: The radio altimeter does not  
14    have direct relationship to the visibility. It depends  
15    on the type of approach that we're flying. For a  
16    category one approach or a non-precision approach we  
17    use it as -- we have the option to use it as a  
18    reference. That's it.

19            DR. BRENNER: Thank you.

20            Mr. Chairman, this completes our questions.

21            CHAIRMAN FRANCIS: KCAB?

22            MR. LEE: Thank you, Chairman.

23            (The rest of Mr. Lee's response in Korean was  
24    not translated.)

1           CHAIRMAN FRANCIS: We'll -- we'll go back now  
2 to the normal interpretation if we can, please.

3           (Pause)

4           (The following is a verbatim transcript of  
5 the English translation of Mr. Lee's questions posed in  
6 Korean and Captain Lee's responses made in Korean.)

7           MR. LEE: Did you get my translation, by the  
8 way? Did you get my translation? Can you raise your  
9 hand?

10          Oh, okay. Let me repeat it. Because most of  
11 the questions that I originally intended to ask have  
12 been covered by the questions that have been just  
13 asked, let me just go on to ask one question only.

14          INTERPRETER: Okay. Let me then translate.  
15 Here it goes.

16          (Resumption of translation)

17          THE WITNESS: You received "glide scope  
18 unusable" information prior to departure -- I mean by  
19 "you" the crew of the accident flight -- prior to the  
20 departure at the Kimpo International Airport through  
21 NOTAM. And also, prior to arrival you receive the same  
22 "glide scope unusual" information -- unusable  
23 information from A-T-I-S. And in addition, you receive  
24 the same information, "glide scope unusable" at the  
25 time that the accident flight was cleared for approach



1 from the CERAP.

2 INTERPRETER: Let me correct -- correct glide  
3 slope to glide scope. Glide scope to glide slope.

4 (Resumption of translation)

5 THE WITNESS: Listening to the contents of  
6 the CVR extracted from the accident, we can see that on  
7 numerous occasions first officer and the flight  
8 engineer kept asking the question whether glide scope  
9 -- glide slope was working or not. You just told us  
10 during your testimony that it is absolutely against  
11 your training instructions to try to execute landing  
12 when there is any problem with the glide slope.

13 The question I'm driving -- trying to drive  
14 at is that to -- in the CVR contents when the first  
15 officer and the flight engineer kept asking the  
16 question, "Is glide slope working?" I want to give it a  
17 benefit of doubt as to how the question was framed. I  
18 would say that under a different possibility, a  
19 different cultural context or circumstance the first  
20 officer and the flight engineer might have asked "Glide  
21 slope is not working so it should not be done this  
22 way."

23 So, my question is whether the way the  
24 question was framed is because of the Korean culture  
25 that kind of inhibited lesser officer from presenting

1 advocacy or challenging the chief pilot?

2 THE WITNESS: We do not know under what kind  
3 of circumstances the crew of the accident flight were  
4 operating. We do not also know whether the -- the  
5 signal or the increment was actually used just based on  
6 the effect that there was an advocacy or inquiries on  
7 the part of the crew. That's all.

8 MR. LEE: Thank you.

9 (End translation of Mr. Lee's questions.  
10 Translation of Captain Lee's responses continued.)

11 CHAIRMAN FRANCIS: Thank you. FAA?

12 MR. DONNER: Thank you, Mr. Chairman. Just a  
13 few questions.

14 Captain Lee, how many sets of approach plates  
15 are available to a 747 crew during flight?

16 (Captain Lee's response is not translated  
17 into English.)

18 MR. DONNER: I'm sorry, sir. I'm not  
19 receiving answers on this.

20 (Pause)

21 INTERPRETER: -- hear me?

22 (Pause)

23 INTERPRETER: We are experiencing some  
24 technical difficulties here, some glitch which is  
25 preventing us from communicating. I'm trying to

1     ascertain whether the witness is -- the witness can  
2     hear me or not, but he's not responding.

3

4             (The interpreter and the witness conversed in  
5     Korean.)

6             INTERPRETER:   Now he can.

7             MR. DONNER:    I think we're all right now.

8             (Resumption of translation)

9             THE WITNESS:   I'm not sure whether I clearly,  
10     unequivocally understood the point of your question, so  
11     it may be probably advisable for you to ask the  
12     question just one more time.

13            (The interpreter and the witness conversed in  
14     Korean.)

15            (Resumption of translation)

16            THE WITNESS:   Okay.   Please go ahead and  
17     repeat the question just one more time, please.

18            MR. DONNER:    Thank you, sir.   Are any  
19     approach plates permanently installed on -- on board  
20     the aircraft?

21            THE WITNESS:   Yes.   Basically, the captain  
22     and the first officer have Jefferson manuals that they  
23     are individually handed out.   It includes the airport  
24     charts and the en route charts for the airports that we  
25     regularly provide carrier service.   There is also one

1 copy of the Jefferson manual in flight.

2 (The interpreter and the witness conversed in  
3 Korean.)

4 INTERPRETER: Let me rest~~at~~ my previous  
5 translation. Here it goes. There is an aircraft  
6 boarding manual also.

7 (Resumption of translation)

8 THE WITNESS: Which includes en routes charts  
9 for alternate airports and en route airport.

10 INTERPRETER: Oh, I'm sorry. Emergency  
11 airports.

12 (Resumption of translation)

13 THE WITNESS: That's all.

14 MR. DONNER: Thank you, sir.

15 Does the flight engineer have any role in  
16 reviewing or monitoring approach plates?

17 THE WITNESS: Yes. In addition to the  
18 primary responsibilities assigned with the flight  
19 engineer. The flight engineer would also help find  
20 instrument panel and visual cue.

21 Let me slightly modify my answer. The flight  
22 engineer would also monitor the instrument panel and  
23 help find the visual cue. That's all.

24 MR. DONNER: Thank you.

1                   May I refer you please to Exhibit 2A, page  
2   24?

3                   (Pause)

4                   MR. DONNER: And this is just a point of  
5   clarification. Near the bottom of the page there's a  
6   statement that the four-day CRM program is given only  
7   to pilots.

8                   THE WITNESS: Yes, I'm looking at it.

9                   MR. DONNER: And on page 25, the next page,  
10   near the top of the page there's a sentence, "Advocacy  
11   teaches the first officers and flight engineers to  
12   intervene when necessary." My question, sir, is do  
13   your flight engineers also receive crew resource  
14   management training?

15                  THE WITNESS: CRM is not part of my training  
16   responsibilities. However, to my knowledge, flight  
17   engineers do receive the CRM training.

18                  MR. DONNER: Thank you. One final question  
19   please on Exhibit 2 November.

20                  THE WITNESS: Yes.

21                  MR. DONNER: And this is the ILS approach to  
22   runway 6-left at Agana. Can you tell me, sir, if the  
23   outer marker is a required piece of equipment to  
24   conduct this approach?

1 THE WITNESS: Are you referring to the ILS or  
2 localizer approach?

3 MR. DONNER: I'm referring to the ILS  
4 approach with the glide slope inoperative.

5 THE WITNESS: Once DME is on out -- the outer  
6 marker doesn't have to be operative.

7 MR. DONNER: Thank you very much, sir. I  
8 have no further questions.

9 CHAIRMAN FRANCIS: NATCA?

10 MR. MOTE: No questions. Thank you, Mr.  
11 Chairman.

12 CHAIRMAN FRANCIS: Guam?

13 MR. DERVISH: Thank you, Mr. Chairman. Just  
14 one quick question.

15 Do you know how many times this flight crew  
16 flew into Guam before the accident?

17 THE WITNESS: The circumstance -- let me  
18 restate it. The nature of the matter is such that I  
19 cannot give you an answer in a nutshell. Let me be  
20 more -- more specific. The captain and first officer  
21 and the flight engineer, they do not always travel  
22 together in the same flight. Also, the -- the aircraft  
23 involved is a 747 Classic, but you can easily imagine  
24 that the crew involved might have flown in a different  
25 type of aircraft previously. That's all.

1 MR. DERVISH: Well, how about the captain?  
2 How many times did he fly into Guam?

3 THE WITNESS: My understanding -- I heard  
4 that it was once that he had flown to Guam prior to the  
5 accident, but I am not sure.

6 MR. DERVISH: Thank you, Captain Lee.

7 CHAIRMAN FRANCIS: I think that information  
8 was both in the record and in Mr. Feith's opening  
9 statement.

10 Boeing Company?

11 MR. DARCY: Mr. Chairman, we have no  
12 questions for Captain Lee. Thank you.

13 CHAIRMAN FRANCIS: Barton?

14 MR. E. MONTGOMERY: No questions, Mr.  
15 Chairman.

16 CHAIRMAN FRANCIS: Korean Air?

17 CAPTAIN KIM: No questions.

18 CHAIRMAN FRANCIS: All right. I think that -  
19 - we've got Mr. Feith.

20 MR. FEITH: Thank you, Mr. Chairman. I just  
21 have several questions.

22 Teddy, could you put up the approach plate  
23 that we were using earlier in -- in Captain Lee's  
24 testimony, please?

1 (Pause)

2 MR. FEITH: Captain Lee, you had given us a  
3 briefing about the approach plate and the information  
4 on the approach plate, and I don't recall if you had  
5 briefed -- part of the approach plate. It's the remark  
6 at the initial approach fix. Could you just brief what  
7 that remark means at the initial approach fix? Right  
8 there where the pointer is.

9 THE WITNESS: Do you mean to be ask me to  
10 describe what the remark is about?

11 MR. FEITH: Yes.

12 THE WITNESS: The initial approach fix, its  
13 name is Hummer, and its location is 7.0 DME from the  
14 Nimitz VOR 3.4.3 radiar -- radar -- 343 radar -- radio.

15 MR. FEITH: And the 7.0 that the pointer is  
16 pointing to refers to the mileage from where to where?

17 THE WITNESS: That indicates the distance  
18 from the Nimitz VOR.

19 MR. FEITH: Thank you. You had spoken  
20 briefly when Captain Misencik was asking questions  
21 about the crew's briefing as it was depicted on the  
22 CVR. Could you please describe if the briefing that  
23 was conducted by the captain for the ILS with the  
24 localizer inoperative covered all of the appropriate  
25 information necessary to execute that approach?



1 THE WITNESS: I found the question kind of  
2 long, so can you just give me the gist one more time?

3 MR. FEITH: You have read the CVR. Was the  
4 captain's briefing to the other crew members inclusive  
5 of all of the information that would be expected by  
6 Korean Air in an approach briefing?

7 THE WITNESS: Just based on the taped  
8 contents in the CVR I cannot say that all the related  
9 matters were covered. However, -- but when you read  
10 the CVR transcript you can come across a phrase, quote,  
11 "As I told you before," unquote. Judging from that  
12 even though the crew did not follow certain format I  
13 can feel it would be fair to say that the crew  
14 discussed briefing.

15 MR. FEITH: Thank you. With regard to the  
16 CVR transcript, it was noted that there were two  
17 altitude alert sounds recorded on the CVR. However,  
18 there was no reaction by the flight crew to either of  
19 those altitude alerts. Does Korean Air have a specific  
20 procedure for the pilots to call either 1000 feet above  
21 a selected altitude or upon capturing the desired  
22 altitude?

23 THE WITNESS: Yes. According to our  
24 procedure we are supposed to make the 1000 above call  
25 prior to 1000 feet above the selected altitude. I

1       meant 1000 level. That's all.

2               MR. FEITH: Let me see if I understand. They  
3       call 1000 feet above the altitude and then also call  
4       when they are level at the desired altitude?

5               THE WITNESS: No, that's not true. The first  
6       call will apply to the case when it is 1000 feet before  
7       the select altitude. It is the other way around from  
8       your understanding.

9               MR. FEITH: Should the crew, either the pilot  
10      flying or the pilot not flying, have called the  
11      altitude as the captain had requested based on the CVR  
12      when he had asked for the altitude of 1440 feet to be  
13      set into the altitude window? There was an -- should  
14      they have called that altitude upon reaching that  
15      altitude? Should someone have said 1440?

16              THE WITNESS: Would you repeat your question  
17      one more time?

18              MR. FEITH: Should either of the pilots have  
19      reacted to the altitude alert when the airplane  
20      descended below 1440 feet on the approach?

21              THE WITNESS: I just told you that we are  
22      supposed to -- to call out before -- at the 1000 feet  
23      level before or below the select altitude. Not below  
24      but before the select altitude.

1           MR. FEITH: And I understand that part of  
2           your answer. My question is because there was an  
3           altitude alert recorded twice on the CVR and there was  
4           no reaction to those altitude alerts, should there have  
5           been based on procedures from Korean -- at Korean Air?

6           THE WITNESS: As I just told you, our crew --  
7           requires us to make a call at 1000 feet before the  
8           select altitude.

9           MR. FEITH: Okay. Thank you, Captain.

10          CHAIRMAN FRANCIS: Wait a minute now. Are  
11          you -- are you happy with that answer?

12          MR. FEITH: I'm not sure that the captain  
13          understands my --

14          CHAIRMAN FRANCIS: Well, let's -- let's make  
15          sure that somebody helps us clarify the question here.

16          INTERPRETER: May I in-- may -- may the  
17          interpreter interject? I'm pretty positive the witness  
18          understood the translated question, but his position  
19          seems like he wants to just keep repeating his position  
20          instead of directly hitting the point of the question.

21          I made some presumptions, but that's my interpretation  
22          in between the lines.

23          MR. FEITH: I would like to get a -- a  
24          clarification because we have two altitude alerts.  
25          This airplane went through two altitudes, the alerts

1     went off, yet no one reacted, and I want to know if  
2     there is in fact a policy or procedure that the crew  
3     should have taken some sort of action to that alert.

4             FIRST OFFICER CHUNG:  Mr. Chairman, may we  
5     assist the witness to understand Mr. Feith's question  
6     in Korean?  Do we have your permission to do that?

7             CHAIRMAN FRANCIS:  Yes, sir.

8             (The following is a verbatim transcript of  
9     the English translation of First Officer Chung's Korean  
10    translation of Mr. Feith's question and Captain Lee's  
11    response in Korean.)

12            FIRST OFFICER CHUNG:  Why -- why don't you  
13    ask him the second part of the question that the -- the  
14    call should be made not just at the time when 1000 feet  
15    is reached before the select altitude but also the time  
16    when desired altitude has been captured?

17            THE WITNESS:  Yes, prior to crossing the --  
18    the 1000-feet mark before the selected altitude and the  
19    aircraft goes on to capture the desired altitude, then  
20    the PNF, the pilot not flying, is supposed to call out  
21    "desired altitude captured."

22            (End translation of First Officer Chung.  
23    Translation of Captain Lee's responses from Korean to  
24    English continued.)

1           MR. FEITH: Thank you. With regard to the  
2 GPWS, does Korean Air have any procedures for reacting  
3 to the GPWS call at 500 feet on a non-precision  
4 approach?

5           THE WITNESS: Up to the time of the accident  
6 the -- the procedure prior to the time of the accident,  
7 it was not required, the 500-foot call. Let me just  
8 elaborate a little bit. As for our Boeing 747 Classic  
9 aircraft, with respect to radio altimeter one type  
10 includes auto-call, the other type does not include  
11 auto-call. With the type that does not have auto-call,  
12 it is the job of flight engineer to make the call. In  
13 such a case the 500-foot call would not be made in the  
14 non-precision approach. However, in the case of a  
15 auto-call regardless of non-precision or precision  
16 approach the 500-foot call is to be made. That's it.

17           MR. FEITH: At 500 feet, since this airplane  
18 had auto-call, the GPWS called 500 feet. Is there a  
19 policy for a practice at Korean Air for the flight crew  
20 to execute a go-around when executing a non-precision  
21 approach and receiving that GPWS call?

22           (The interpreter and Captain Lee conversed in  
23 Korean.)

24           CHAIRMAN FRANCIS: I think there's the  
25 request for a clarification here.

1           FIRST OFFICER CHUNG: Mr. Chairman, we'd like  
2 to enter for the record that the translation process is  
3 fairly accurate and literal. However, we're running  
4 into an -- a pattern here. The gist of the meaning is  
5 not being transferred and there's a great deal of  
6 misunderstanding throughout this session. May we  
7 intervene at this time again?

8           CHAIRMAN FRANCIS: On this question go ahead.

9           FIRST OFFICER CHUNG: Thank you.

10           (First Officer Chung translated both  
11 questions posed in English to Korean and Captain Lee's  
12 responses made in Korean to English.)

13           MR. FEITH: What I'm asking is does Korean  
14 Air have a policy or a practice that when a flight crew  
15 receives a GPWS call of 500 feet during a non-precision  
16 approach that the crew automatically execute a missed  
17 approach or go-around or do they evaluate and continue  
18 the approach?

19           THE WITNESS: We do not have a procedure that  
20 mandates a go-around at 500 feet automatically. That  
21 is, in regard to the GPWS calls.

22           MR. FEITH: But since the flight engineer did  
23 not make a 500-foot call, would that -- would that  
24 change had the flight engineer made the 500-foot call?

1           THE WITNESS: Are you asking our thoughts or  
2     opinions?

3           MR. FEITH: Is there a policy that had -- on  
4     -- on those airplanes that don't have automatic 500-  
5     foot call, if the flight engineer had made that call,  
6     would that have necessitated a go-around by the flight  
7     crew?

8           FIRST OFFICER CHUNG: I believe he said  
9     there's no procedure to -- that mandates a go-around  
10    whether it's an auto-call or a flight engineer-derived,  
11    you would not go around at 500 feet.

12          MR. FEITH: Are you aware of any other  
13    airlines that use the practice of automatic go-around  
14    at 500-foot GPS call?

15          THE WITNESS: I have not heard of such an  
16    airline.

17          MR. FEITH: Okay. Thank you.

18          Captain Lee, on the transcript of the CVR the  
19    captain at 15:41:14 -- and you don't need to turn to  
20    it, I'll read it to you -- the captain made a call in  
21    response to a checklist item and his response -- the  
22    captain's response was, quote, "No flags, gear flap,"  
23    end quote. Can you tell me what he would be referring  
24    to when making that call, particularly regarding the  
25    "no flags" call?

1 THE WITNESS: The phrase "no flag" implies  
2 that no instrument -- not any single instrument on the  
3 instrument panel has a flag indication throughout.

4 MR. FEITH: Would that include the ILS flag?

5 THE WITNESS: It includes all flags.

6 MR. FEITH: Captain Lee, you had answered a  
7 question for Dr. Brenner, I believe, regarding cultural  
8 issues that may have been an influence in one of the  
9 discussions or the discussion about the glide slope.  
10 Based on your reading of the CVR, do you believe there  
11 are any other cultural factors or influences that you  
12 see in the way the crew was reacting or interacting  
13 throughout the course of time that the CVR covers?

14 THE WITNESS: May I verify that did make a  
15 remark regarding cultural something when Dr. Brenner  
16 answered? I don't remember specifically answering in  
17 regard to cultural aspects.

18 CHAIRMAN FRANCIS: Was that possibly a  
19 question from Mr. Lee?

20 MR. FEITH: That may have been, I'm sorry.  
21 Yes.

22 Basically what I'm -- I'm just asking is, is  
23 -- is there -- was there possibly an inhibition by the  
24 first officer or the flight engineer to question the  
25 captain throughout the period of time where commands



1       were being given or actions were being requested by the  
2       captain?

3               THE WITNESS: I do not feel that way.

4               MR. FEITH: And one last question, Captain.  
5       You had made a statement regarding -- I think it was  
6       with -- to Captain Misencik -- when you were describing  
7       how the non-precision approach that involves a step-  
8       down is flown. I believe you had -- or at least it is  
9       my understanding of what you said that a pilot may in  
10      fact do a constant-rate descent for passenger comfort,  
11      more or less. Did I understand that correctly?

12              THE WITNESS: I put a caveat on that remark  
13      when I said that. And the condition was that he would  
14      set each altitude on the approach plate limiting the  
15      step-down and satisfy those altitude limitations. That  
16      was a condition that he would perform this.

17              MR. FEITH: So, if I understand that  
18      correctly, the step-down procedures would still be  
19      followed during the course of the approach even with a  
20      constant-rate descent?

21              THE WITNESS: I definitely remember saying  
22      that in VMC conditions provided that all altitude step-  
23      down fixers are satisfied above that limitation that we  
24      have the -- we simply exercise the option to perform  
25      this, and it implies that we can do it, not that we

1 teach it or we -- it is not taught that we do this.

2 MR. FEITH: Two questions to that. One, this  
3 approach was flown at night, and given that they went  
4 from VMC to IMC conditions on the approach, would this  
5 be a prudent practice by a flight crew to exercise?

6 FIRST OFFICER CHUNG: You're referring to the  
7 constant --

8 MR. FEITH: Constant rate.

9 FIRST OFFICER CHUNG: -- descent gradient?

10 THE WITNESS: Of course, when I said VMC  
11 conditions before, that -- I did not include nighttime.  
12 I believe this is a matter of phrasing it, but I'm  
13 talking about VMC conditions in daytime. Visual  
14 conditions, I'm sorry. And I would say in the case of  
15 the 801, this would not apply.

16 MR. FEITH: Well, that would be my second  
17 question is, given the flight profile that has been  
18 revealed during the course of the investigation using  
19 FDR and radar information which depicts 801 at a  
20 relatively constant rate descent, does captain believe  
21 that this type of approach was being flown that night?

22 THE WITNESS: I'm not an expert in the  
23 analysis of flight data recorders, but I have seen the  
24 data myself. In my opinion, the altitude was captured  
25 at 1440 feet. I also believe that it was captured at

1     560 feet.

2                   MR. FEITH:  What makes him believe that?

3                   THE WITNESS:  First about the 1440.  We have  
4     performed some simulations in the same type of  
5     aircraft.  I would say that the -- the pitch-up  
6     indicated would not have been simply from a  
7     configuration change.  And the power was increased.  
8     Just prior to that event we also noticed a vertical G  
9     being slightly increased, it appears, vertical G.  And  
10    I believe at this point it tells me that the captain is  
11    controlling through a vertical speed mode.  I am not an  
12    expert on the subject, of course.

13                   Regarding the 560 feet, if I may use the --  
14    summary in the exhibit, just prior to the point where  
15    the captain disengages the autopilot for the purpose of  
16    go-around the pitch -- we have the appearance or the  
17    effect -- an effect of the pitch raising somewhat.  
18    That's my opinion on why I think that.

19                   INTERPRETER:  Mr. Chairman, may I talk to the  
20    interpreter just very briefly?

21                   CHAIRMAN FRANCIS:  Are you through with that  
22    question, Greg?

23                   MR. FEITH:  Yes.  I'm just formulate --  
24    unless you've got a follow-up to that question --

1 CHAIRMAN FRANCIS: No, I'm --

2 MR. FEITH: -- just thinking --

3 CHAIRMAN FRANCIS: -- I'm not sure -- go any  
4 -- anywhere further with that.

5 (Pause)

6 MR. FEITH: I have no further questions.

7 CHAIRMAN FRANCIS: Thank you.

8 Monty?

9 MR. M. MONTGOMERY: I have no questions.  
10 Thank you.

11 MR. CARISEO: No questions, Mr. Chairman.

12 (First Officer Chung continued to translate  
13 both the questions posed in English to Korean and  
14 Captain Lee's responses from Korean to English.)

15 MR. BERMAN: Captain Lee, it sounds like  
16 you've reviewed the cockpit voice recorder transcript.  
17 I'll make some references to it but read from it for  
18 you.

19 At 15:37:07 - correction. At 15:33:38 the  
20 captain refers to, "What's the number for Guam 17?" and  
21 the first officer replies, "17." Do you know what that  
22 is in reference to? 17?

23 THE WITNESS: The accident -- the accident  
24 aircraft was installed with the ANS system. When you  
25 approach the destination airport you change the legs

1 page to make the destination appear so that you can  
2 know your final distance to the destination as well as  
3 the time to the destination. And they're aware to the  
4 fact that the ANS has a built-in error associated.  
5 That's it.

6 MR. BERMAN: Okay. At 15:37:07 the flight  
7 crew refers to INS DME display. Is that the same  
8 display as the DME from VOR?

9 THE WITNESS: That -- that particular point  
10 in the CVR has been cut off or interrupted. But  
11 speaking in general, after having checked the flight  
12 plan for the accident air -- aircraft, number 17 refers  
13 to the Guam Airport. Number 16 is the Nimitz VOR.  
14 That would be my answer.

15 MR. BERMAN: Where is the INS display located  
16 in the cockpit?

17 THE WITNESS: On the center pedestal, as he  
18 put it, the center console, right next to the captain  
19 on his right. Across the center console right next to  
20 the first officer is the display number two. On the  
21 aft portion of the same console is number three.

22 MR. BERMAN: All right. Thank you.

23 Let me ask you to help us understand the  
24 instrumentation. If the mode control panel altitude  
25 selector were set at 1440 and the altitude capture had

1 engaged and then the altitude selector were changed to  
2 560 before the altitude 1440 were held, what would be  
3 the effect on the aircraft?

4 CHAIRMAN FRANCIS: Let's be very certain that  
5 this question is fully understood, please.

6 FIRST OFFICER CHUNG: Okay.

7 THE WITNESS: I understand your questions to  
8 mean this is the pilot not having engaged the altitude  
9 hold switch and continuing to set the next altitude.

10 MR. BERMAN: This is correct. If the  
11 altitude 560 were set prior to altitude hold.

12 THE WITNESS: That would -- differ depending  
13 on how much time lag or delay there was after the  
14 altitude hold switch was engaged. The altitude capture  
15 mode has a certain transition layer or something to  
16 that effect. If it's -- if the autopilot is in the  
17 altitude capture transition phase or period and at that  
18 time if the altitude selection was lowered it maintains  
19 the pitch -- it means the -- maintains the pitch at the  
20 time of the adjustment? Would that be correct? It  
21 maintains the pitch -- pitch at -- as -- as -- at the  
22 time of the -- the switch being changed.

23 MR. BERMAN: So, it would descend below --

24 FIRST OFFICER CHUNG: I'm sorry. Go ahead.

1           THE WITNESS: As long as you don't touch the  
2 speed mode switch, that -- that -- that is what would  
3 happen.

4           MR. BERMAN: So it would descend below 1440?

5           THE WITNESS: Of course, that is true  
6 provided once again that the -- prior to capture that  
7 this action was taken place.

8           CHAIRMAN FRANCIS: It would go through 1440?

9           FIRST OFFICER CHUNG: He -- he said yes, it  
10 would go through 1440 but this is under the premise  
11 that we stated before is what he said.

12          MR. BERMAN: Prior -- as long as it was done  
13 prior to altitude hold being engaged?

14          THE WITNESS: That's correct.

15          MR. BERMAN: Okay. And I know we've  
16 discussed this before, but I think we need to revisit  
17 once -- one more time. Does Korean Air have a required  
18 call-out by the pilot not flying if the airplane  
19 descends through an assigned altitude?

20          THE WITNESS: I have said that the standard  
21 call-out covers the altitude capture call.

22          MR. BERMAN: Right. And if the altitude is  
23 not captured is my question now.

24          THE WITNESS: I'm not sure I understand the  
25 content of the question.

1           MR. BERMAN: I'm understanding that the  
2 required call-out is "the altitude has been captured."

3       My question now is what is the required call-out in  
4 the absence of altitude capture?

5           THE WITNESS: All crews are supposed to  
6 monitor the altimeter while the altitude is changing.  
7 If for some reason such as mechanical failure or just  
8 anomalies that the airplane fails to capture an  
9 altitude, it is expected that the first crew to notice  
10 this with call it out.

11          MR. BERMAN: Okay. I understand.

12          Referring to the approach chart for the ILS  
13 approach to runway 6-left executing the approach with  
14 the glide slope inoperative, what would the crew do if  
15 the outer marker were not received in this approach?

16          THE WITNESS: It would seem that the crews  
17 would not be aware that the outer marker was -- whether  
18 the outer -- outer marker was operating or not. They  
19 would not know until they passed that point. But since  
20 the -- but since they have a DME and assuming that the  
21 DME was operating correctly, the -- they would know  
22 when they were at the outer marker position.

23          MR. BERMAN: Okay. Thank you.

24          How do pilots in general identify, when they  
25 are going to use a constant descent method, the



1 position or time to begin the descent on a non-  
2 precision approach?

3 THE WITNESS: We don't recommend the constant  
4 descent method, as I said before. But if they were to  
5 do it, we would base this decision with reference to  
6 the airport -- to the final airport elevation.

7 MR. BERMAN: Okay.

8 THE WITNESS: Yes, of course.

9 MR. BERMAN: Okay. Thank you.

10 You testified earlier that about half of the  
11 airports served by the 747 Classic have the VOR and DME  
12 located off the field.

13 THE WITNESS: I'm saying that one airport  
14 will have many different types of approaches. And I'm  
15 including all those.

16 MR. BERMAN: Okay. And how many of those  
17 airports does the approach use the DME that's located  
18 off the field?

19 THE WITNESS: I believe -- I understand that  
20 I explained that about half the airports have the DME  
21 non co-located with the field.

22 MR. BERMAN: Okay. How many at the -- of how  
23 many of those airports does the ILS or localizer  
24 approach use the DME distance that is located off the  
25 field?

1 THE WITNESS: Would you repeat that question,  
2 please?

3 MR. BERMAN: At how many of these airports  
4 does the ILS or localizer approach use DME information  
5 located off the field?

6 THE WITNESS: At this time I don't really  
7 know. I can't put a finger on that.

8 MR. BERMAN: Okay. Referring to the  
9 Jefferson manual that you said was carried aboard the  
10 aircraft, the third manual, are the airport approach  
11 charts for Guam included in that manual?

12 THE WITNESS: I believe the -- at the time of  
13 the accident the Guam chart was included in the  
14 individual charts -- individual crew-carry possession  
15 charts.

16 MR. BERMAN: But not in the aircraft charts  
17 for emergency airports?

18 THE WITNESS: That's correct.

19 MR. BERMAN: If we could return briefly to  
20 the -- this issue of the constant descent approach.  
21 You said that they don't -- Korean Air doesn't  
22 recommend this method.

23 THE WITNESS: Yes, that's true. I am talking  
24 about training -- during training.

1           MR. BERMAN: Is it prudent to condone that  
2 type of procedure in actual line operations?

3           THE WITNESS: That is -- I believe that's  
4 entirely up to the discretion of the pilot in command  
5 and we neither condone nor disparage those practices.

6           MR. BERMAN: But you are aware of these  
7 practices?

8           THE WITNESS: Yes, I'm aware in practice.

9           MR. BERMAN: Thank you.

10           (End translation)

11           CHAIRMAN FRANCIS: Thank you very much,  
12 Captain Lee. This has been a -- an extraordinarily  
13 long morning for all of us but I suspect particularly  
14 for you, and we appreciate your tolerance. I don't  
15 like to take -- breaks in the middle of witness  
16 testimony because there is a -- a benefit for  
17 continuity. We thank you very much for your -- for  
18 your patience and for your testimony. Thank you.

19           We will now take a break for lunch and  
20 reconvene at 1:00.

21           (Whereupon, at 11:55 a.m., the proceedings  
22 were adjourned for lunch, to reconvene at 1:00 p.m. the  
23 same day.)

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A F T E R N O O N   S E S S I O N

1:00 p.m.

CHAIRMAN FRANCIS: All right. Our next witness this afternoon will be Captain Park, director of Academic Flight Training, Korean Air.

MR. SCHLEEDE: It's Mr. Park.

CHAIRMAN FRANCIS: Excuse me. Mr. Park, not Captain Park.  
Whereupon,

PARK, CHOON SIK  
was called as a witness, and first having been duly sworn, was examined and testified as follows:

**EXECUTIVE COURT REPORTERS, INC.**  
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1 TESTIMONY OF  
2 PARK, CHOON SIK  
3 DIRECTOR, ACADEMIC FLIGHT TRAINING  
4 KOREAN AIR  
5 SEOUL, KOREA

6 (First Officer Chung resumed the duties of  
7 translating both the questions posed in English to  
8 Korean and Mr. Park's responses from Korean to  
9 English.)

10 MR. SCHLEEDE: Mr. Park, please give us your  
11 full name and title and business address for our  
12 record?

13 THE WITNESS: My name is Park, Choon Sik. I  
14 work in the city of Seoul, Tim Chung Dum (ph) area, at  
15 the Academic Facility.

16 MR. SCHLEEDE: And what is your position at  
17 the Academic Facility?

18 THE WITNESS: I am the chief academic  
19 coordinator for academic instruction. My job is to  
20 maintain the academic programs for the different types  
21 of training that goes on. We also administer  
22 management programs for the instructors and for the CRM  
23 programs.

24 MR. SCHLEEDE: Could you please give us a  
25 brief summary of your education and experience that

1       qualifies you for your present position?

2               THE WITNESS: I attended a four-year  
3       university and majored in Political Science. In '75 I  
4       entered the Air Force as a lieutenant. And in 1960 I  
5       went through the U.S. Air Force navigator training  
6       qualification program. I also have training in  
7       instruction as an instructor.

8               Then I separated from the Air Force in '69  
9       and entered the Korean Airlines at that time. Until  
10      1977 I was in the position of a navigator -- flight  
11      navigator for Korean Airlines. After that time I  
12      transitioned to a flight engineer and I have served in  
13      the 727 aircraft, A300, and the 747. Then I worked as  
14      a flight engineer and also as an instructor. In 1994 I  
15      went from a regular flight engineer to a -- to current  
16      position.

17              MR. SCHLEEDE: Thank you, Mr. Park. Captain  
18      Misencik and Dr. Brenner will continue the questioning.

19              CAPTAIN MISENCIK: Good afternoon, Mr. Park.  
20      Are you still current and qualified as a -- a flight  
21      engineer at Korean Air?

22              THE WITNESS: No, I left the line in 1993  
23      from line duties.

24              CAPTAIN MISENCIK: What role do you have in  
25      the flight operations training program, the training

1 manual for training pilots? Have -- did you have any  
2 role in developing that program?

3 THE WITNESS: I don't have direct involvement  
4 with the manuals development as such, but my primary  
5 duties are to -- for initial qualification, maintaining  
6 proficiency, and CRM training.

7 CAPTAIN MISENCIK: What role does the KCAB  
8 have in approving or accepting Korean Air procedures  
9 and manuals?

10 THE WITNESS: At the current time the -- all  
11 of the aircraft operations manual, training manuals,  
12 procedures as well as policies need to be approved by  
13 KCAB.

14 CAPTAIN MISENCIK: Is there a record of  
15 comments and criticisms made by the KCAB in approving  
16 the flight operations training manuals?

17 THE WITNESS: Up to now there -- fortunately,  
18 up to now there have not been any such remarks.

19 CAPTAIN MISENCIK: Okay. Mr. Park, I'd like  
20 to just kind of give you an outline of what we will  
21 talk about today. It's three main topics.

22 FIRST OFFICER CHUNG: Go ahead.

23 CAPTAIN MISENCIK: The simulator training and  
24 standardization of procedures, CFIT training, and crew  
25 performance and CRM.

1 THE WITNESS: Okay.

2 CAPTAIN MISENCIK: In simulator training,  
3 what percentage of training is observed by the KCAB?

4 FIRST OFFICER CHUNG: Could you say KCAB  
5 checkers?

6 CAPTAIN MISENCIK: KCAB checkers or -- yeah.

7 THE WITNESS: Rather than percentage figures,  
8 there -- they observe two to three times annually.

9 CAPTAIN MISENCIK: Does that mean total for  
10 the airline they observe two to three simulator  
11 training sessions?

12 THE WITNESS: That is correct. However, for  
13 type rating check rides we use the designated checking  
14 system. But as far as KCAB direct, two or three times  
15 annual.

16 CAPTAIN MISENCIK: I just want to clarify  
17 that. That's airline-wide there's -- the KCAB observes  
18 two to three simulator training sessions?

19 THE WITNESS: Not specifically to say that  
20 they look at the session but that they -- excuse me.  
21 As an inspection program of sorts to overall manage and  
22 oversight two or three times a year.

23 CAPTAIN MISENCIK: Are ~~there~~ -- is there a  
24 record of comments that they have made on these  
25 inspection events?



1           FIRST OFFICER CHUNG: They -- I don't believe  
2 he's answering the right question. He's said -- They  
3 look at the -- they look at many training records is  
4 what he said.

5           THE WITNESS: They observe training  
6 processes. They also look at the training results.

7           CAPTAIN MISENCIK: I -- I understand. But  
8 the question is, is there a record that the -- at  
9 Korean Air of the times that the KCAB has done these  
10 things?

11          THE WITNESS: They are supposed to give us  
12 corrective action -- recommended corrections when they  
13 have their inspection. And they will give us list of  
14 things that we are performing incorrectly. So yes,  
15 there would be a record.

16          CAPTAIN MISENCIK: Do you recall any specific  
17 comments that the KCAB may have made relative to  
18 training?

19          THE WITNESS: I certainly cannot recall all  
20 the remarks that they made, but we have been identified  
21 as -- for recurrent training needing more varied  
22 destinations in our simulator training.

23          CAPTAIN MISENCIK: Are there any types of  
24 checks, flight checks, check rides that the KCAB is  
25 required to observe instead of a designated company

1 checker or examiner?

2 THE WITNESS: Yes, there are. For the  
3 smaller type aircraft for captain checks that they are  
4 required to perform direct inspections or evaluations.

5 And once annually they also perform an evaluation of  
6 the designated checkers.

7 CAPTAIN MISENCIK: When I asked earlier how  
8 many simulator sessions the -- or training events the  
9 KCAB observes, the answer was two to three. That must  
10 have been -- we must have misunderstood each other.  
11 Could you clarify that?

12 FIRST OFFICER CHUNG: Actually, that -- he  
13 would like to correct that and say not about sessions.

14 There's really less inspection of the sessions --  
15 simulator sessions that go on.

16 CAPTAIN MISENCIK: I -- I'm not sure I  
17 understand that.

18 CHAIRMAN FRANCIS: Can we -- can we clarify  
19 that? I think we'd better start over again here 'cause  
20 I think there's a --

21 THE WITNESS: As far as observing simulator  
22 sessions, KCAB does not come out and inspect simulator  
23 sessions.

24 CAPTAIN MISENCIK: Okay. Basically, you --  
25 are you saying that the KCAB does not -- does not

1 observe training periods? They only observe check  
2 rides? Is that correct?

3 THE WITNESS: KCAB does look at check rides.  
4 The two to three times that I mentioned was their  
5 inspection of the education program.

6 CAPTAIN MISENCIK: Okay. I just really have  
7 to clarify this. There's no training -- no training  
8 sessions observed by the KCAB, but they observe a  
9 number of proficiency checks or type rating rides, is  
10 that --

11 FIRST OFFICER CHUNG: Would you clarify that  
12 as to whether you're referring to simulators right now?

13 CAPTAIN MISENCIK: Okay. In the simulator,  
14 does the KCAB observe any training periods that are not  
15 flight checks or type rating rides?

16 THE WITNESS: You're correct. There are no  
17 direct observations of training for proficiency -- I'm  
18 sorry, for type rating check in the simulator.

19 CHAIRMAN FRANCIS: Now, wait- wait a  
20 minute. Right to the last phrase there I think I was  
21 clear. There is no observation in the simulator of  
22 training sessions but there may be in the simulator  
23 observation of check rides or proficiency rides, is  
24 this correct?

1 THE WITNESS: I'm sorry. I was -- I was  
2 confused.

3 (First Officer Chung and Mr. Park conversed  
4 in Korean.)

5 FIRST OFFICER CHUNG: They're asking about  
6 simulators right now.

7 (First Officer Chung and Mr. Park continued  
8 to converse in Korean.)

9 FIRST OFFICER CHUNG: Again, this -- may I  
10 clarify? This is in reference to KCAB oversight?

11 CAPTAIN MISENCIK: That's correct. What I  
12 want to know is we'll break it down and separate  
13 training from check rides.

14 FIRST OFFICER CHUNG: Go ahead.

15 CAPTAIN MISENCIK: How many times does the  
16 KCAB observe training sessions, the simulator training  
17 sessions profiles one through 10 or whatever the  
18 profile is up to the check ride?

19 THE WITNESS: They don't have appreciable  
20 number of training sessions that they observe.  
21 However, for the check ride simulator -- simulator  
22 check rides they do observe it from start to finish.

23 CAPTAIN MISENCIK: Okay. And in the  
24 simulator check rides what percentage are observed by  
25 the KCAB?

1           THE WITNESS: As I said before, for smaller  
2 aircraft types for simulator check ride, the KCAB  
3 participates directly. Your question was what  
4 percentage -- percentage of --

5           (Mr. Park interrupted the interpreter in  
6 Korean.)

7           FIRST OFFICER CHUNG: Oh, he said almost all  
8 small aircraft type simulator check rides, almost all  
9 are observed by KCAB.

10          CAPTAIN MISENCIK: And in the 747 Classic,  
11 what percentage of proficiency checks and recurrent  
12 check rides, type rating rides are observed by the  
13 KCAB?

14          THE WITNESS: For the larger aircraft types  
15 we mainly use designated examiners.

16          CAPTAIN MISENCIK: So, are you saying there's  
17 a small percentage or --

18          THE WITNESS: I don't exactly remember the  
19 percentage figure.

20          CAPTAIN MISENCIK: But there are records?  
21 Are there records?

22          THE WITNESS: If you need further proof of  
23 the records then I can provide them to you once I  
24 return.

1 CAPTAIN MISENCIK: Thank you. Each of the  
2 training profiles described in the training guide  
3 appear to be two hours long. How are these profiles  
4 used in the training curriculum?

5 THE WITNESS: Basically, the -- each  
6 simulator session is really composed of four hours.  
7 The two hours you're referring to is divided by pilot  
8 flying and pilot not flying.

9 CAPTAIN MISENCIK: At the end of the two  
10 hours what happens? Do they swap pilot flying roles?

11 THE WITNESS: That's correct.

12 CAPTAIN MISENCIK: And then the -- the  
13 profile is repeated?

14 THE WITNESS: Yes, they do use the same  
15 profile.

16 CAPTAIN MISENCIK: Are simulator instructors  
17 encouraged to follow the scenarios in each profile or  
18 are they encouraged to modify the -- the scenarios in  
19 any way?

20 THE WITNESS: These are -- profiles are  
21 really lesson plans and they should follow them  
22 throughout.

23 CAPTAIN MISENCIK: The training profiles list  
24 the VOR DME for runway 3-2 approaches at Kimpo as the  
25 most common non-precision approach. How do pilots

1 receive training in different types of non-precision  
2 approaches?

3 THE WITNESS: It's -- it is true that the --  
4 the 3-2 approach that you mentioned is the mainly used  
5 non-precision approach. What -- we have one localizer  
6 approach profile, and I personally feel that this is  
7 insufficient. Our plan is to diversify the non-  
8 precision types of approaches and to -- to increase the  
9 requirement on these.

10 CAPTAIN MISENCIK: During recurrent training  
11 proficiency checks, which scenario is used? Is it for  
12 a non-precision approach?

13 THE WITNESS: As I've just stated, the VOR  
14 DME approach is the mainly used scenario, but from this  
15 year we're going to use more diverse types of  
16 approaches.

17 CAPTAIN MISENCIK: Thank you.

18 Are there any non-precision approach  
19 scenarios used in training where the DME used for the  
20 approach is not located on the airport?

21 THE WITNESS: Up to now, no. We teach the  
22 basic principles of a non-precision approach, that they  
23 would be able to appropriately -- when they review the  
24 approach plate they would be able to react accordingly  
25 according to the needs of the approach.

1           CAPTAIN MISENCIK: Could you describe some of  
2 the scenarios used in simulator training which help  
3 pilots adapt to unexpected situations during approach  
4 procedures?

5           FIRST OFFICER CHUNG: Unexpected scenarios  
6 you said?

7           CAPTAIN MISENCIK: Yes. Unexpected  
8 situations.

9           THE WITNESS: I believe you're referring to  
10 pilot incapacitation. As far as responses to that  
11 situation, we have a standard call-out procedure at  
12 critical point during flight such as during the  
13 approach. If the PF would not react to a challenge by  
14 the PNF, then the PNF is taught to aggressively take  
15 over controls.

16           In addition, the 1000-foot point and the 500  
17 points are designed so that -- to check the aircraft's  
18 stabilization along final, and at these times if the  
19 aircraft is found not to be stabilized then the PNF  
20 would be using the same principle, take-over controls  
21 if he had to.

22           CAPTAIN MISENCIK: Has the CAB ever  
23 commented on the -- the fact that the non-precision  
24 approach scenarios seem to be limited to very few --  
25 very few approaches?



1           THE WITNESS: We have had -- we have had the  
2 feedback to that effect by KCAB.

3           CAPTAIN MISENCIK: Is that -- when -- when  
4 did you get that feedback?

5           THE WITNESS: Since the accident KCAB has  
6 said that the destination airport is not varied enough  
7 and the types of approaches are not varied enough.

8           CAPTAIN MISENCIK: Are there training  
9 scenarios where a pilot is expecting a -- a full ILS  
10 but there is a diversion to a -- an airport with a non-  
11 precision approach that is not a standard Korean Air  
12 destination?

13          THE WITNESS: Yes, periodically on the aloft  
14 profile we would run into something like that.

15          CAPTAIN MISENCIK: According to Korean Air  
16 procedures, could you list the -- the responses to the  
17 GPWS alerts as in the training manual? I know there  
18 was some -- the reason I'm saying this is there was  
19 some confusion from an earlier testimony.

20          THE WITNESS: It is -- the concept is covered  
21 in -- included in the training manual. As to GPWS  
22 alerts, we're supposed to make immediate avoidance  
23 actions. But the method will defer -- differ depending  
24 on the mode of the GPWS alert.

1 CAPTAIN MISENCIK: Has Korean Air received  
2 material from the Flight Safety Foundation relative to  
3 CFIT?

4 THE WITNESS: We have a VTR, audio-visual  
5 educational aid from that Flight Safety Foundation.

6 CAPTAIN MISENCIK: And how has this  
7 information been put to use by Korean Air in the CFIT  
8 training program?

9 THE WITNESS: Basically, the main CFIT device  
10 of the GPWS equipment is covered in the academic  
11 instruction material. However, if we should talk about  
12 the manual that we obtained from -- that we obtained  
13 and the VTR materials -- we would like to add these  
14 points to the ground school instruction.

15 CAPTAIN MISENCIK: Does -- could you describe  
16 Korean Air CFIT training program or how it's utilized  
17 in the training curriculum now -- Mr. Park?

18 FIRST OFFICER CHUNG: Would you repeat that  
19 question, please?

20 CAPTAIN MISENCIK: Yeah. Would you describe  
21 how CFIT is -- CFIT awareness is used in the Korean Air  
22 training curriculum?

23 THE WITNESS: I'll speak of the current  
24 system of training. As I said, the GPWS systems  
25 education is covered in ground school. The avoidance

1 procedures are covered under the procedures section of  
2 ground school. The simulator training syllabus  
3 contains two scenarios. Since we received that  
4 previously mentioned material we are planning on  
5 incorporating the -- the written material into our  
6 training.

7 CAPTAIN MISENCIK: Mr. Park, with the CRM  
8 program that you have, could you describe basically the  
9 -- the format or the curriculum of the CRM program that  
10 you have at Korean Air at this time?

11 THE WITNESS: We originally obtained the  
12 program from the United Airlines in 1986. The entire  
13 material has been translated into Korean and we're  
14 using that now. Of course, all of the CRM programs  
15 that -- different programs have the same objectives,  
16 but we have sort of a laboratory -- we have the  
17 laboratory type is what we have.

18 CAPTAIN MISENCIK: How long of a course is  
19 it? And is it -- does it involve all Korean Air  
20 employees?

21 THE WITNESS: The course is three nights,  
22 four days, and requires about 39 hours of instruction.  
23 And it would apply not to all employees but to all air  
24 crew members.

1 CAPTAIN MISENCIK: Mr. Park, how do you  
2 measure the success of the Korean Air CRM program?

3 FIRST OFFICER CHUNG: Excuse me. I'm not  
4 sure if I said that properly. May I have another  
5 chance at it? You say how is --

6 CAPTAIN MISENCIK: How is success -- how is  
7 success measured? How do you know that the CRM program  
8 is working?

9 FIRST OFFICER CHUNG: How do we know that the  
10 CRM program is working?

11 THE WITNESS: We do not have a appropriate  
12 way to measure the success of our program. But in  
13 order to make this program successful we have made  
14 efforts in two different directions. One, the CRM  
15 awareness is introduced to the CRM seminar courses.  
16 And the practice will be worked out in the aloft  
17 scenarios. The evaluation team would evaluate the CRM  
18 program each year. And we seek for that area which  
19 applies most to our airline. And that has been  
20 selected as our task of the year. Then we try to  
21 reflect this into the aloft training.

22 CAPTAIN MISENCIK: This CRM program, has it  
23 changed since -- since the accident?

24 THE WITNESS: The CRM seminar portion has not  
25 changed.

1 CAPTAIN MISENCIK: What -- what has changed?

2 THE WITNESS: Each years aloft is conducted  
3 in the second half -- the latter half of the year. And  
4 up to now it's been hour and 30 minute aloft. And our  
5 plan is to increase this time to two hours and 30  
6 minutes.

7 CAPTAIN MISENCIK: Mr. Park, based on your  
8 review of the exhibits, including the CVR and the  
9 flight data recorder, how do you assess the accident  
10 crew's performance relative to CRM and crew  
11 coordination?

12 THE WITNESS: Before I give an evaluation or  
13 an assessment, may I speak first about some standards?  
14 The goal of our CRM program involve interaction  
15 through the processes of inquiry and -- advocacy to  
16 come up with effective solutions, and if I look at it  
17 from that standpoint and then if I look at our crew --  
18 accident crew, then it is difficult for me to say that  
19 they performed up to that standard in general.

20 CAPTAIN MISENCIK: Mr. Park, since the  
21 accident could you give us a -- an indication of what  
22 changes or what -- you -- you listed some, but what  
23 changes or contemplated changes may occur as a result  
24 of this accident in the academic department?

1           THE WITNESS: Since the investigation is  
2 still under going -- is still under going we have  
3 implemented only part of this program. Last year  
4 latter half through special educational program every  
5 crew member was reviewed on the instrument approach  
6 procedures. The CFIT, the VTR program, and the  
7 contents were introduced to the crews. As I said  
8 before, the aloft profile is planning to be increased  
9 to two and a half hours to change the CFIT academic  
10 curriculum programs. Those are the -- the changes  
11 underway at this time.

12           CAPTAIN MISENCK: Okay. Thank you, Park --  
13 Mr. Park. I'm -- I have no further questions. I think  
14 Dr. Brenner has -- has some follow-on.

15           DR. BRENNER: Yes, Mr. Park. In 1989 a  
16 Korean Air suffered a CFIT, C-F-I-T, accident in  
17 Tripoli, Libya. Are you aware of any safety changes  
18 that resulted from this accident?

19           THE WITNESS: At the time I was not in a  
20 managerial position so I'm not too familiar with this,  
21 but from what I have discovered in the process of  
22 upgrade from a first officer to a captain 14 hours of  
23 additional instrument flying was added to the program  
24 and in terms of simulator sessions two types of CFIT-  
25 related GPWS warnings were included in the simulator

1 session. As far as academic instructional system, it  
2 used to be tutorial style and it was changed to CBT,  
3 computer-based training style or method, so that it  
4 became a tutorial plus the CBT kind of a program at  
5 that time.

6 DR. BRENNER: Thank you. Were there any  
7 special considerations for adapting the CRM program to  
8 Korean culture and values?

9 THE WITNESS: That's a difficult problem and  
10 I would like to talk to you about it through an  
11 example. All air crew members participating in a CRM  
12 education program -- at the time of entering into the  
13 program about 80 percent of all crew members feel that  
14 they are qualified or fall in a category -- I'm sorry?

15 That they're best qualified air crew. They grade  
16 themselves to be in the upper category. But at the end  
17 of the program those who when they reassess their  
18 cockpit operations styles and such, this number falls  
19 to somewhere around 10 percent.

20 At the same time, they do gain this new value  
21 system, new value system wanting to become more adept  
22 at running an efficient cockpit management. And this  
23 statistic is the -- the same between our figures and  
24 that of the United Airlines. So I believe that the CRM  
25 processes do not speak of appreciable difference.

1           But when it comes to actual application in  
2     the cockpit I think there are some differences. Japan  
3     Airlines is an example of a company that two years ago  
4     adapted this kind of a program and in the same  
5     geographical area as Korean Airlines, and they do not  
6     speak of cultural differences in that situation.

7           The only remark I would like to make is that  
8     when it comes to the environment of cockpit operation  
9     that they -- that it needs to become culture-free in  
10    order to obtain our objective of safety standard. So,  
11    not so much cultural adaptation but driving the crews  
12    toward a culture-free state more in order to -- this  
13    culture-free cockpit environment to reach the  
14    objectives of safety rather than cultural adaptation or  
15    cultural aspect to approach the safety objective from  
16    this -- this angle.

17           DR. BRENNER: Thank you, Mr. Park. And just  
18    to clarify for me, if I understand, your company found  
19    that the United Airlines program was successful and did  
20    not need to be adapted to a Korean -- Korean emphasis?

21           THE WITNESS: We -- to this day we're not  
22    really compelled to change this program as it is, but  
23    taking into consideration the rapid state of cockpit  
24    automation we need to develop -- further develop and  
25    improve this program. We feel this need at this time.



1 DR. BRENNER: Thank you. And there was an  
2 earlier question, in this accident do you think that  
3 the subordinate crew members were inhibited from  
4 questioning the captain. I'd appreciate your views.

5 FIRST OFFICER CHUNG: I'm sorry. The last  
6 part I stepped on you.

7 DR. BRENNER: Oh, I would appreciate his  
8 views.

9 FIRST OFFICER CHUNG: That they felt which  
10 way, sir?

11 DR. BRENNER: That they felt inhibited --

12 FIRST OFFICER CHUNG: Inhibited.

13 DR. BRENNER: -- from questioning the  
14 captain.

15 THE WITNESS: In the Oriental culture there  
16 is a -- the concept of modesty, but when I look at the  
17 overall cooperative atmosphere among the crew members I  
18 do not really feel that way.

19 DR. BRENNER: Thank you, Mr. Park.

20 That completes my questions, Mr. Chairman.

21 (End of translation by First Officer Chung.  
22 Regular interpreters resumed translation duties.)

23 CHAIRMAN FRANCIS: KCAB?

24 MR. LEE: Thank you, Chairman. I have only  
25 question. I'll confirm the factual approach.

1           When you see the factual report page 10, page  
2   11, and page 12 according to personnel information the  
3   number one captain, second first officer, thirdly --  
4   third is a flight engineer. If you see that each  
5   paragraph end -- the end of the -- each paragraph -- he  
6   says that -- that record doesn't show the time or date  
7   of the -- of the crew members who received the certain  
8   education. What I'm referring to is the CRM program.  
9   As far as I know, since we MOTC -- MOCT inspect and  
10  also from the personal training record I -- I could  
11  confirm this record, yet you mentioned earlier that  
12  from this record it's -- it's impossible to check from  
13  the personal training record. Is that correct?

14           Then since your -- you didn't receive this  
15  kind of report it's -- did you -- have you ever asked  
16  and required to the NTSB to modify this kind of records  
17  or this kind of procedure?

18           THE WITNESS: After the certain program or  
19  training is finished, all the result is recorded in  
20  computer, but what type of the content of -- in that  
21  record I'm not sure as to why I -- I'm -- don't  
22  understand why this kind of a report is necessary.  
23  Even though it's -- here it says that cannot check the  
24  record but actually there's a -- that kind of a record  
25  is available. I'm sorry. It's unfortunate that I -- I

1 will be -- were not able to modify.

2 MR. LEE: That's the question. Thank you.

3 CHAIRMAN FRANCIS: Then I would ask if -- if  
4 this is the case that this could be presented to us for  
5 the record, please, through the KCAB.

6 Do you have a further question?

7 MR. LEE: Yes, I understand.

8 CHAIRMAN FRANCIS: Do you have a further  
9 question or is that -- KCAB?

10 MR. LEE: No more questions.

11 CHAIRMAN FRANCIS: Boeing Company?

12 MR. DARCY: We have no questions, Mr.

13 Chairman.

14 CHAIRMAN FRANCIS: NATCA?

15 MR. MOTE: Thank you, Mr. Chairman. No  
16 questions.

17 CHAIRMAN FRANCIS: Korea Air?

18 CAPTAIN KIM: No questions, sir.

19 CHAIRMAN FRANCIS: Barton?

20 MR. E. MONTGOMERY: No questions, Mr.

21 Chairman.

22 CHAIRMAN FRANCIS: Guam?

23 MR. DERVISH: Thank you. No questions.

24 CHAIRMAN FRANCIS: FAA?

1 MR. DONNER: No questions, Mr. Chairman.

2 CHAIRMAN FRANCIS: Mr. Feith?

3 MR. FEITH: I just have a few questions.

4 (First Officer Chung resumed translating both  
5 the questions posed in English to Korean and Mr. Park's  
6 responses from Korean to English.)

7 MR. FEITH: Can you explain to us how pilots  
8 are upgraded, what the -- what the requirements are as  
9 based on seniority?

10 FIRST OFFICER CHUNG: Pilot -- which part,  
11 sir?

12 MR. FEITH: How are pilots upgraded?

13 THE WITNESS: Not based on seniority but by  
14 flight experience.

15 MR. FEITH: What would be the requirement  
16 from upgrading from a first officer to a captain with  
17 regard to flight experience?

18 THE WITNESS: I'm not qualified to speak on  
19 this from an expert point of view, but from what I know  
20 for the military background pilots about 3000 hours and  
21 for the -- background 4000 hours.

22 MR. FEITH: Let me make sure I got this  
23 correct. This captain on Flight 801 had about 9000  
24 hours. He had transitioned off of another aircraft,  
25 727. The first officer on this airplane had about 4000

1 hours. When would he be ready to upgrade to a captain  
2 if it's based on flight experience?

3 THE WITNESS: As I told you before, as far as  
4 the policy for upgrade I'm not really the man to talk  
5 to about. But if you need to, I can go into some  
6 detail for you. I would need some time.

7 MR. FEITH: Let me move to something you may  
8 know more about. How are instructor pilots selected?

9 THE WITNESS: Most of our simulator  
10 instructors are line experienced, retired pilots on a  
11 contract basis with Korean Air. As far as line  
12 instructors, as in the case of Captain Lee that just  
13 testified this morning, that's based on flight  
14 experience and overall experience that they would be  
15 selected. As far as the exact figure, I don't have  
16 that.

17 MR. FEITH: Is there any special training  
18 curriculum for a instructor pilot once he has been  
19 selected?

20 THE WITNESS: Yes, there is. Ground school  
21 is 13 hours, eight hours on simulator instruction and  
22 on how to -- how to use the simulator equipment. That  
23 includes actual hands on at -- in -- at the instructor  
24 position. And after they are checked at the line  
25 through a flight check then they're designated as

1 flight instructors.

2 MR. FEITH: Thank you.

3 You had spoken earlier about the involvement  
4 with the KCAB as it regards your training program.  
5 Have you ever -- have you ever had to modify or change  
6 any of your training curriculum because of deficiencies  
7 or suggestions given to you by KCAB?

8 THE WITNESS: Yes, there are many instances  
9 in the past, but in particular, as I mentioned, the  
10 recurrent simulator profiles regarding the accident.  
11 Those would be the types of changes and it occurs all  
12 the time. As further examples of Guam approach  
13 scenarios and other difficult approach profiles, he  
14 says, for non-precision approaches have been updated.

15 MR. FEITH: Mr. Park, can -- I'd just like to  
16 ask a question about the GPWS minimums call-outs. Is  
17 there any specific training a pilot receives when the  
18 oral GPWS call-outs occur? Is there any action that is  
19 required of the crew?

20 THE WITNESS: Would you please specify your  
21 question more clearly?

22 MR. FEITH: On the CVR, it is recorded that  
23 the GPWS was doing the 500-foot call-out and then  
24 counted down from 100 feet. The crew did not talk  
25 about it from what was on the CVR, and there, from my

1 point of view in reading the CVR, did not appear to be  
2 any reaction to those call-outs. Is there a procedure  
3 or a policy at Korean Air that would require the crew  
4 to either identify those call-outs and/or react to  
5 those call-outs?

6 THE WITNESS: First, why the CVR has those --  
7 why the CVR recorded what we hear I don't -- I can't  
8 imagine why this happened. Yeah, we teach this during  
9 instrument flight rules education. All simulator  
10 training and procedures teach immediate responses to  
11 minimum GPWS call-outs.

12 MR. FEITH: So, what would the appropriate  
13 response have been?

14 THE WITNESS: The fact that they did not make  
15 appropriate reaction to those call-outs is the part  
16 that I can't understand myself.

17 MR. FEITH: Thank you. One -- one last  
18 question. Are the instructors provided any special  
19 training with regard to CRM and the evaluation of CRM?

20 THE WITNESS: Not the seminar instructors but  
21 those who perform this at -- in the line. The  
22 proficiency check ride items and all check rides have a  
23 graded section for CRM. So, we do give a grade on the  
24 CRM interaction.

1           MR. FEITH: Well then, following onto that  
2 question, if you find a deficiency or a problem with  
3 CRM, how do you implement change because this is more  
4 of a behavioral type change, not so much a procedure?  
5 How do you influence that kind of change?

6           THE WITNESS: In this case, the chief pilots  
7 at the line would be consulted for appropriate  
8 solutions.

9           MR. FEITH: You may have already asked this -  
10 - answered this once before, but in your experience or  
11 your knowledge of the airline operations, have you ever  
12 heard of or observed a reluctance to the changes that  
13 would naturally come with a CRM program from previous  
14 operating, for lack of better words, culture where the  
15 captain was typically an authoritative figure in the  
16 cockpit?

17          THE WITNESS: You'd be surprised to find out  
18 we do not have any kinds of resistance as you speak of.  
19 Just the contrary, all of the managers have been  
20 accepting promoting of the CRM concept, and our  
21 president of the company as well has been known to  
22 promote the program.

23          MR. FEITH: Given the fact that the managers  
24 accept it, do the line pilots accept it?



1           THE WITNESS: It is true that most of our  
2 line captains have educational experiences that stem  
3 from United States. Most of -- most of our aircraft  
4 have been purchased from the United States so that  
5 actual training would take place in the U.S. as well in  
6 a lot of the circumstances. So most of the captain are  
7 familiar with U.S. customs and the training  
8 philosophies.

9           When it comes to the younger people in our  
10 airline, we -- the media -- the media --

11          FIRST OFFICER CHUNG: I would say their  
12 thoughts are more progressive due to the influence by  
13 the media I believe is what he's saying.

14          (Resumption of translation)

15          THE WITNESS: So that have we not come a long  
16 ways from the old way of thinking.

17          MR. FEITH: If I can just get a summary of  
18 yes or no, given all of that explanation is there a  
19 reluctance on the line pilot part to accept all of the  
20 training philosophies and this -- this new way of doing  
21 business in the cockpit?

22          THE WITNESS: Yes. I feel as I see it, yes.  
23 They're positively accepting of the new changes.

24          FIRST OFFICER CHUNG: Is that -- is that  
25 clear?

1           MR. FEITH: Yes, I guess it is if -- if that  
2           is his -- his belief that there is an acceptance of --  
3           of this in the cockpit, yes.

4           One more thing, and that is you had spoken of  
5           the first officer taking aggressive action in a  
6           situation that may call for such action to be taken,  
7           i.e. or that is, when the captain may not respond to  
8           the second call that a first officer makes. Have you  
9           ever trained this, observed this in the simulator or in  
10          line operation?

11          THE WITNESS: This is specified in the  
12          standard call-outs. The standard call-out instruction  
13          specifically states the action to take in this  
14          instance, so I -- it is trained.

15          MR. FEITH: Okay. My question, I guess, is,  
16          to be very simple, have you ever observed the first  
17          officer take command of the airplane from the captain?

18          THE WITNESS: I have not seen it.

19          MR. FEITH: Thank you. I have no further  
20          questions.

21          MR. CARISEO: No questions, Mr. Chairman.

22          CHAIRMAN FRANCIS: Go ahead.

23          MR. BERMAN: Mr. Park, based on what you've  
24          said, I understand that Korean Air has received the  
25          Flight Safety Foundation controlled-flight-into-terrain

1 training program.

2 THE WITNESS: Yes.

3 MR. BERMAN: Had the airline received this  
4 program prior to the accident?

5 THE WITNESS: Yes, we did.

6 MR. BERMAN: Had you used it in your training  
7 curriculum prior to the accident?

8 FIRST OFFICER CHUNG: He would like you to  
9 clarify which material you're talking about again, sir?

10 MR. BERMAN: The training manual and the  
11 videotape.

12 THE WITNESS: Last year's latter half  
13 recurrent ground school, the videotape was shown to all  
14 crew members.

15 MR. BERMAN: Mm-hmm. Had you used the CFIT  
16 checklist produced by the Flight Safety Foundation?

17 THE WITNESS: Not yet.

18 MR. BERMAN: With respect to pilot upgrades  
19 based on seniority and flight experience, how many  
20 pilots have failed the upgrade program from first  
21 officer to captain in the last five years?

22 THE WITNESS: I do not remember as to the  
23 number, but I would say a significant number.

24 MR. BERMAN: Can you give me an estimate of  
25 the percentage of upgrade candidates who failed?

1           THE WITNESS: I wasn't expecting to answer  
2           that question so I don't know.

3           MR. BERMAN: And what is the company's  
4           procedure for the pilots who fail the upgrade to  
5           captain? What -- what happens to them?

6           THE WITNESS: As to the action taken  
7           subsequent to that, we don't handle that. That is  
8           handled by a separate board.

9           MR. BERMAN: Okay. Would you please provide  
10          this information for the record? The percentage of  
11          upgrade candidates who fail and the company's actions  
12          afterwards.

13          THE WITNESS: Do you need that by a certain  
14          time?

15          MR. BERMAN: No. No, sir. Just please  
16          provide them when you can.

17          THE WITNESS: Okay.

18          MR. BERMAN: Thank you. No further  
19          questions.

20          MR. M. MONTGOMERY: I have no questions.  
21          Thank you, Mr. Chairman.

22          CHAIRMAN FRANCIS: I just have a comment, I  
23          guess, rather than a question. But I'm not sure what  
24          -- what exactly you mean by a culture-free cockpit.  
25          I'm not sure that on the face of it I would -- I would

1     accept that there is such a thing. I would just say, I  
2     guess, that there's an enormous amount of very work --  
3     good work being done on culture in the cockpit and  
4     cross cultures in the cockpit, and -- and I hope that  
5     all of us that are involved in this industry and -- and  
6     in aviation safety will be paying a lot of attention to  
7     this, and as you commented earlier, that we'll be  
8     constantly adapting to -- to what we learn as we go on.

9             Thank you, Mr. Park, for your -- ~~for~~ your  
10    contribution.

11            (Pause)

12            CHAIRMAN FRANCIS: He's -- Mr. Park is  
13    excused.

14            THE WITNESS: Thank you very much, Chairman.  
15            (Whereupon, the witness was excused.)

16            CHAIRMAN FRANCIS: And we'll go from Mr. Park  
17    to Captain Park now as the next witness.

18            We will continue with the translator from the  
19    -- front here. I think that's facilitating a little  
20    bit, and then when we finish with this witness we'll go  
21    back to the interpreters in the rear of the room. That  
22    is, assuming Steve is holding out all right.

23            FIRST OFFICER CHUNG: -- holding up.

24            CHAIRMAN FRANCIS: You holding up okay,  
25    Steven?

1 FIRST OFFICER CHUNG: Yes, I'm sorry. I --

2 CHAIRMAN FRANCIS: This is -- this is real  
3 work, I know.

4 FIRST OFFICER CHUNG: One more --

5 CHAIRMAN FRANCIS: -- appreciate what you're  
6 doing.

7 FIRST OFFICER CHUNG: Thank you --

8 CHAIRMAN FRANCIS: If we can continue through  
9 this witness it's very helpful I think.

10 FIRST OFFICER CHUNG: We appreciate the  
11 opportunity you're giving us. Thank you, Mr. Chairman.  
12 Whereupon,

13 CAPTAIN PARK, PYUNG-WOO  
14 was called as a witness, and first having been duly  
15 sworn, was examined and testified as follows:

16 TESTIMONY OF

17 CAPTAIN PARK, PYUNG-WOO

18 DEPUTY DIRECTOR, FLIGHT OPERATION

19 KOREAN AIR

20 SEOUL, KOREA

21 MR. SCHLEEDE: Captain Park, please give us  
22 your full name and business address for our record?

23 THE WITNESS: My name is Pyung-Woo Park.  
24 Currently I work at the Korean Air Flight Operations  
25 branch located at the Seoul City --

1           MR. SCHLEEDE: And what is your position at  
2 Korean Air, please?

3           THE WITNESS: Currently, I am the flight  
4 operations -- at Korean Airlines deputy director for  
5 Flight Operations.

6           MR. SCHLEEDE: Could you please give us a  
7 brief summary of your training, education, experience  
8 that qualifies you for your present position?

9           THE WITNESS: Graduated from the Korean Air  
10 Force Academy in 1966. Was commissioned and served for  
11 10 years in the Korean Air Force. In the Air Force I  
12 mainly flew as a pilot on the C46 and the C54 type  
13 aircraft. I separated in 1976 May the -- May the 4th.  
14 I'm sorry, May the 31st.

15           I entered Korean Airlines in May the 19th of  
16 1977 as a flight engineer on the 707. I transitioned  
17 to first officer in November of 1980, and May the 15th  
18 of 1985, I became a 707 captain. As a captain I flew  
19 in the MD 82 and the 747 Classic before I became a 747-  
20 400 captain in 1991. I'm currently also serving as a  
21 747-400 line captain and an evaluator, and I have a  
22 total time of approximately 14,300 hours. Excuse me,  
23 18,300 hours.

24           I have been in the current position since  
25 November 20 -- 20th of 1996, as the deputy director.

1 At the current position I'm mainly in charge of  
2 personnel matters, scheduling matters, and overall  
3 management and oversight of our flight crew members at  
4 Korean Air.

5 MR. SCHLEEDE: Thank you very much. Captain  
6 Misencik and Dr. Brenner will continue.

7 CAPTAIN MISENCIK: Good afternoon, Captain  
8 Park.

9 THE WITNESS: Good afternoon, sir.

10 CAPTAIN MISENCIK: At the time of the  
11 accident, what was your title at Korean Air?

12 THE WITNESS: I was the deputy director at  
13 the time as I am now.

14 CAPTAIN MISENCIK: Okay. Captain Park, does  
15 Korean Air receive or solicit input from pilots  
16 regarding items of concern to them?

17 THE WITNESS: It does not occur frequently,  
18 but we do have cases of this happening.

19 CAPTAIN MISENCIK: Have pilots expressed  
20 concerns that you recall regarding training or flight  
21 procedures?

22 FIRST OFFICER CHUNG: Would you repeat that  
23 question, sir? I'm sorry.

24 CAPTAIN MISENCIK: Have pilots expressed  
25 concerns to management regarding the training program



1 or flight procedures?

2 THE WITNESS: Yes, that all -- also occurs  
3 every now and then.

4 CAPTAIN MISENCIK: Do you have any  
5 recollection of some examples of some of the issues  
6 that pilots have raised in the past?

7 THE WITNESS: I'll give you one example. On  
8 the Classic 747 non-precision procedures according to  
9 the training manual published by the Boeing Company  
10 prior to the final approach fix they're supposed to run  
11 the landing checklist. Some line captains when they  
12 applied the Boeing procedures exactly that the workload  
13 involved in looking for visual cues as well as  
14 performing checklist items, that they were too busy to  
15 conduct this. Therefore, we requested -- they  
16 requested that the procedure be changed to perform the  
17 landing checklist prior to the final approach fix.

18 We collected this kind of information. We  
19 turned it over to the evaluations section and they  
20 verified as to this fact. And the chief pilots got  
21 together and discussed this matter thoroughly. And we  
22 felt that this was -- this needed to be changed, so we  
23 contacted the Boeing Company at that time.

24 We expressed our desire to change the  
25 procedure to the Boeing Company, asked for their

1 opinion as to the safety of making these procedural  
2 changes. After being advised that it did not infringe  
3 on flight safety we did change the procedure. By  
4 filing to the KCAB we received approval for this change  
5 to procedure.

6 CAPTAIN MISENCIK: Has Korean Air management  
7 in the past received any items of concern from pilots  
8 regarding the island of Guam or the approaches there?

9 THE WITNESS: Not prior to the accident.

10 CAPTAIN MISENCIK: Since the accident am I to  
11 assume that there has been some --

12 THE WITNESS: We have had verbal reports as  
13 well as captain report on written format come through  
14 about DME, the outer marker, and the glide slope not  
15 appearing as they were -- as they were reported to  
16 appear.

17 CAPTAIN MISENCIK: Do you have written  
18 records of those reports?

19 THE WITNESS: Of course, not the oral reports  
20 that I remember, but the written reports, I should have  
21 some in my office.

22 CAPTAIN MISENCIK: Has there been any input  
23 from the pilots regarding the -- the complexity of the  
24 approaches into Guam or the -- the terrain?

1 THE WITNESS: No, there have not been any  
2 comments in that regard.

3 CAPTAIN MISENCIK: Captain Park, how many  
4 airports on Korean Air's route structure do not have a  
5 VOR and DME located on the airport?

6 THE WITNESS: Excuse me. I don't have,  
7 again, exact figure as to how many airports exactly,  
8 but as an example John F. Kennedy Airport, the Canarsi  
9 (ph) approaches to runway 1-3 would be an example.  
10 Also, at Anchorage Airport and Frankfort Airport the  
11 VOR's located outside the airport. We did not feel  
12 that this kind of data required any kind of statistical  
13 percentage figures, so we didn't -- we don't have any  
14 data that relates to your question.

15 CAPTAIN MISENCIK: Captain Park, are there  
16 records kept or do you have any idea how many missed  
17 approaches are made in a given year?

18 THE WITNESS: We have not had the need to  
19 categorize missed approach -- missed approach instances  
20 into a percentage figure.

21 I should add something to that. The reason  
22 we don't do that if we -- if the management's action  
23 kept track of the number of missed approaches we felt  
24 that this would force undue pressure on the pilots to  
25 perform the -- force a landing when they should go

1 around. That's why we don't have -- we don't track  
2 that.

3 CAPTAIN MISENCIK: Mr. Park had already  
4 indicated the amount of -- the quality of CFIT training  
5 that is being considered or implemented into the  
6 academic curriculum. Could you tell us what management  
7 is doing with the CFIT initiative, if there is a CFIT  
8 program in -- in the works?

9 THE WITNESS: We did -- at the time we didn't  
10 put a name on it as such as a CFIT, but -- even prior  
11 to 1993 we took the initiative to make the CFIT concept  
12 an awareness. I'd like to give you some examples of  
13 the kind of education regarding CFIT.

14 Starting from the initial education for  
15 people that are new hires, transition and qualification  
16 and through recurrent training that occurs on a regular  
17 basis, so we've conducted CFIT education. Particular,  
18 in 1993 using the medium of "Flight Safety Magazine,"  
19 which is used by the management to -- as a material for  
20 overall flight safety education. We have numerous  
21 articles that -- regarding the CFIT education. And in  
22 September of 1996 we took the more detailed CFIT  
23 material in the same medium and connected this  
24 educational training throughout the -- the pilot force.

1           What I've just disclosed to you is entered as  
2   our exhibit in -- under 2S.

3           CAPTAIN MISENCIK: Captain Park, the  
4   information that you entered as an exhibit, the  
5   articles on CFIT, how are those -- how is that  
6   information circulated to the pilots?

7           THE WITNESS: The -- the -- these articles as  
8   well as other items are distributed through the  
9   individual mail boxes at our company.

10          CAPTAIN MISENCIK: The -- the articles as  
11   they are distributed, is there a -- a -- is it required  
12   reading? Is there a -- a survey taken of the pilots  
13   that respond to these articles?

14          THE WITNESS: All educational training  
15   materials transmitted to the crews the crews are  
16   required to read. We verify as to whether they read  
17   these material or not through periodic or no-notice  
18   inspections during recurrent and simulator training.

19          CAPTAIN MISENCIK: Most of these -- you have  
20   pilots from a -- a number of different countries and  
21   backgrounds flying at Korean Air. What language are  
22   these articles transmitted to the pilots?

23          THE WITNESS: It's usually in English.

24          CAPTAIN MISENCIK: Do you recall if any of  
25   these articles had focused on the lessons learned from

1 the Cali accident?

2 THE WITNESS: Would you specify the question  
3 one more time?

4 CAPTAIN MISENCIK: Do you recall if any of  
5 the flight safety CFIT accidents had information  
6 relating to the -- the American Airlines Cali accident?

7 THE WITNESS: Personally I do not remember  
8 sitting here.

9 CAPTAIN MISENCIK: What is the Korean Air  
10 policy regarding Enhanced Ground Proximity Warning  
11 Systems in aircraft?

12 THE WITNESS: We have been aware of the  
13 performance advantages to the EGPWS for some time. We  
14 have received material on the subject.

15 Since this hearing is related to the 801  
16 accident in particular, may I make one comment about  
17 the 801 accident? At the time of the accident the  
18 EGPWS was not in a practical -- was not practically  
19 implemented. However, for the aircraft to come on line  
20 scheduled for June of this year, new aircraft, this  
21 aircraft should have the EGPWS device installed.

22 CAPTAIN MISENCIK: Is there a plan to  
23 retrofit other aircraft with EGPWS?

24 THE WITNESS: My understanding is that the  
25 current models of the EGPWS, it is not practical to

1 retrofit older airplanes because of the modifications  
2 involved.

3 CAPTAIN MISENCIK: Captain Park, would you  
4 please describe the training at Korean Air for special  
5 airports and for unfamiliar airports, please?

6 THE WITNESS: Excuse me. As far as the  
7 special airports, this would apply to Korean Airlines  
8 any special circumstances regarding not only the flying  
9 part but on the ground; for instance, the CIQ process  
10 itself. But certainly including arrivals, approaches,  
11 departure, any flight procedures requiring particular  
12 care would be classified as special airport.

13 Continuing on to air traffic control  
14 capabilities, the facilities -- NAV/AID facilities,  
15 approach lighting systems, obstruction training  
16 classes, we take those into consideration. Those  
17 airports that have these considerations to make it more  
18 difficult, then we would classify it as a special  
19 airport. This also takes into account the weather  
20 factors.

21 (Pause)

22 THE WITNESS: For special airports prior to  
23 the route training as a part of the academic  
24 instruction they learn route procedures in the  
25 particular special airports. And we emphasize these

1 special airports during route academic training. Then  
2 they come to experience it firsthand during the what we  
3 call the route training in-flight.

4 For the unfamiliar airport, these are applied  
5 to any airport that the company airplane has not  
6 accessed within the last year, more than a year. When  
7 we operate into the unfamiliar airport, we would  
8 normally schedule it so that the PIC would be a  
9 designated examiner standard or better. If this should  
10 prove not practical we'd require captain with more than  
11 1500 hours in type as PIC. If that should also prove  
12 to be impossible, the last -- carrier with, say, 1000  
13 hours PIC in type and an instructor-qualified person  
14 would go. If we don't have the screws to schedule into  
15 -- that meets either -- any of these three criteria  
16 then we would not operate into that airport.

17 CAPTAIN MISENCIK: Captain Park, we'll refer  
18 to Exhibit 2D. 2D page one.

19 Put it on the screen, please.

20 (Pause)

21 CAPTAIN MISENCIK: Item three describes the  
22 terrain. This is an excerpt from the -- the English  
23 translation of the audio-visual presentation used by  
24 Korean Air for familiarization with -- with Guam, and  
25 item three describes the terrain in the vicinity of the



1 airport. Do you consider that the description of the  
2 terrain is adequate or descriptive enough of the  
3 terrain on the approach course to runway 6?

4 THE WITNESS: The audio-visual system is used  
5 in general as part of the general education for airport  
6 familiarization, and in this case the 803-feet high  
7 Mount Macana (ph) is very specifically mentioned. And  
8 it also talks about the minimum safe altitudes that are  
9 -- that apply to Guam Airport.

10 CAPTAIN MISENCIK: The fact that the -- the  
11 refer to Mount -- I hope I'm pronouncing it right --  
12 Macaya -- Macana, 803 feet, is located north of the  
13 Nimitz VOR and Mount Jumoan (ph) is 11 miles south --  
14 south -- southwest, in your estimation is that adequate  
15 guidance that there may be a higher terrain in the  
16 vicinity of the VOR?

17 THE WITNESS: I take this to -- I analyze  
18 this to mean that there's a -- a mountain near the VOR.

19 CAPTAIN MISENCIK: If you'll refer to page  
20 three now of the Exhibit 2D, item 14. Item 14 states,  
21 "You will be guided from over Apra (ph) Harbor to  
22 localizer. You will then perform a visual approach as  
23 in this picture." Do you consider this statement may  
24 condition a pilot to -- to expect a visual approach in  
25 all circumstances?

1           THE WITNESS: I -- we -- I do not feel this  
2 way. The reason we teach all pilots at Korean Air that  
3 instrument -- flight instrument approaches are safer  
4 and perhaps less -- as easier to perform than the  
5 visual approach so that even if approach clearance  
6 would give us a visual clearance we would ask -- go  
7 back and ask for an instrument approach clearance and  
8 try to fly that.

9           CAPTAIN MISENCIK: Captain Park, how do you  
10 consider the 801 accident in the context of CFIT? Do  
11 you consider this a CFIT accident?

12           THE WITNESS: It is incumbent upon the Board  
13 to make the final determination as to the  
14 classification of 801, whether this is a CFIT accident  
15 or not. However, speaking as a pilot I would like to  
16 interject my personal opinion on the subject.

17           I think that the CFIT accident categorization  
18 would pretty much require normal operation of  
19 instruments, but in the case of the 801 all the  
20 information that was available to the pilot was  
21 significantly different than the reality as they found  
22 it during approach. They anticipated the glide slope  
23 to be completely out of service but they have -- had a  
24 no flag indication, some sort of indication in the  
25 cockpit. The weather factor, the weather conditions

1     that the crew actually ran into were significantly  
2     worse than what the ATIS had -- had them expect.  
3     Unfortunately, in the process of giving the approach  
4     clearance by the CERAP if the -- the approach control  
5     had just once more confirmed the glide slope as being  
6     out of service to the pilots I think that this accident  
7     would -- could have been prevented. That's all.

8             CAPTAIN MISENCIK: Captain Park, do you feel  
9     that Korean Air pilots by the statement on the -- by  
10    the statements that you made about always preparing for  
11    a -- an instrument approach conditions them to possibly  
12    always expect a electronic glide slope?

13            THE WITNESS: I would not think so.

14            CAPTAIN MISENCIK: During proficiency checks  
15    and type ratings, what is the failure rate for Korean  
16    Air pilots?

17            THE WITNESS: It's difficult for me to say,  
18    but based on my experience and knowledge as a manager  
19    along the entire spectrum of training I think about  
20    four percent. If we were to include the Jaju Abinishio  
21    (ph) program, the figure would come up to something  
22    like 10 percent would be my guess.

23            CAPTAIN MISENCIK: Do you have any specific  
24    figures on the failure rate among type rating rides?

1           THE WITNESS: As far as I know, the -- I  
2 believe this -- the numbers are about three to four  
3 percent with type rating checks.

4           CAPTAIN MISENCIK: What are the most common  
5 -- common reasons for failure? Do you know?

6           THE WITNESS: If you were to take initial  
7 training, they may have inadequate systems knowledge.  
8 Then they would just fail it simply during the oral  
9 phase of the check. For some checks it's usually on  
10 procedural matters. Our company has really high  
11 standards when it comes to flight -- flight  
12 evaluations. For instance, the tolerance for the  
13 altitude restrictions is minus zero feet. We have  
14 instances where the -- during approaches or departures  
15 they would fail for not -- for failing to keep an  
16 altitude or remain within track.

17          CAPTAIN MISENCIK: After a pilot receives his  
18 type rating in an airplane, what further training does  
19 he receive regarding IOE or route qualification?

20          THE WITNESS: As I said before, after the  
21 person gets a type rating they would, depending on the  
22 aircraft type, receive further education starting with  
23 about 30 hours of ground school for the route. After  
24 that education's complete. After the academic portion  
25 we perform 30 take-off and landing practices in the

1     simulators.  This process -- this process involves  
2     maximum operational limitations for that aircraft,  
3     maximum crosswind, maximum tailwind, severe  
4     turbulences, wind shear conditions.  We give them the  
5     opportunity that requires maximum performance on the  
6     part of the pilot proficiency and put 'em through that  
7     program.  After that, simulator training simply.

8             After they've gone through that then they  
9     enter into route training that covers every air field  
10    that they will be qualified to fly into from that  
11    point.  The -- the qualification granted by the KCAB on  
12    their route qualification or route experience is --  
13    requires one round trip or two one-way flights to that  
14    destination in order to be considered qualified by the  
15    KCAB.  After that they would receive the -- their check  
16    rides, and for the smaller aircraft types, meaning the  
17    F100 Blocker, F100, and the MD 82, they would receive  
18    check directly from a KCAB checker.  For the larger  
19    aircraft types they would receive check rides through  
20    the designated examiners.  Once they have passed the  
21    check ride then they're route-qualified at that point.

22            CAPTAIN MISENCIK:  What is the Korean Air  
23    policy for -- let me back up.  How -- generally, how  
24    many hours does that route qualification take?

1 THE WITNESS: It differs by aircraft type.  
2 For the 747 Classic about 130 hours.

3 CAPTAIN MISENCIK: And that -- that route  
4 qualification is -- includes -- or IOE is an integral  
5 part as we understand IOE, is that correct?

6 FIRST OFFICER CHUNG: Would you repeat that  
7 question, sir?

8 CAPTAIN MISENCIK: I said the IOE is a  
9 integral part of the route qualification. I mean  
10 there's not a separate IOE. It's -- they're done  
11 concurrently or consecutively I guess.

12 THE WITNESS: It is incorporated into the  
13 route -- IOE's incorporated into the route.

14 CAPTAIN MISENCIK: What is the Korean Air  
15 policy for first officers flying the airplane?

16 THE WITNESS: We recommend first officers --  
17 direct experience in controlling the airplane to  
18 improve their proficiency levels.

19 CAPTAIN MISENCIK: What percentage of flight  
20 legs or flight segments are flown by first officers?

21 THE WITNESS: I believe about 30 percent.

22 CAPTAIN MISENCIK: What percentage of  
23 approaches and landings do first officers make?

24 THE WITNESS: Since we -- since we consider  
25 giving controls to the other pilot both take-off and

1 landing would be considered giving -- it would be the  
2 same as the previous answer.

3 CAPTAIN MISENCIK: What percentage of  
4 landings in instrument conditions less than VFR are  
5 made by first officers?

6 THE WITNESS: Among the landings that first  
7 officers perform would it not be about half -- 50  
8 percent of the landings they perform would be in some  
9 sort of instrument conditions. However, this has to  
10 meet the regulation 4-5-6 about transfer of aircraft  
11 control and the minimum weather associated with -- for  
12 the captain qualification. So, there's limitations on  
13 the weather how -- how far they can go. That would be  
14 the condition that they couldn't fly instrument.

15 CAPTAIN MISENCIK: Are you saying that  
16 there's different minimums for first officers than for  
17 captains? Is -- or -- or what -- what -- what is the  
18 implication of what you said?

19 THE WITNESS: Not that the instrument  
20 minimums would be different but the weather minimum,  
21 and I'll give you an example. For a precision approach  
22 you would have to add 200 feet to the approach minimums  
23 to transfer control of aircraft to the first officer.  
24 And you would add half mile on the visibility.

1 CAPTAIN MISENCIK: How about for a non-  
2 precision approach?

3 THE WITNESS: 300 feet on the ceiling.  
4 Visibility --

5 (Pause)

6 FIRST OFFICER CHUNG: He's converting meters  
7 to feet at this time.

8 THE WITNESS: One and a quarter miles, about.

9 CAPTAIN MISENCIK: Captain Park, has a pilot  
10 ever received an unsatisfactory rating on a check ride  
11 because of CRM or poor CRM?

12 THE WITNESS: As I remember, there have been  
13 no instances of a check ride failure due specifically  
14 to CRM. But in general line flying there have been  
15 instances where there was report of captains' CRM  
16 techniques by either the first officer, any of the  
17 flight crew members, or even including cabin, there  
18 have been instances of disciplinary action.

19 CAPTAIN MISENCIK: Do first officers and  
20 flight engineers ever make reports of poor CRM or CRM  
21 concerns regarding captains?

22 THE WITNESS: Yes, rarely. It does occur.

23 CAPTAIN MISENCIK: How is that handled?

24 THE WITNESS: We have that particular  
25 individual go through counseling with a chief pilot.



1 If that should not prove to be a solution we try to use  
2 the un-matching policy among the -- those two or  
3 whoever -- among the people involved. Once a person is  
4 on an unmatched policy with another individual, the two  
5 of them would not fly together until one of them got  
6 out of that aircraft type.

7 CAPTAIN MISENCIK: Has the Korean Air ever  
8 been warned or been in danger of losing Part 129  
9 authorization to operate into the United States or any  
10 of its territories?

11 THE WITNESS: From what I remember I believe  
12 there's one standing case --

13 FIRST OFFICER CHUNG: Excuse me. May I ask  
14 him the answer one more time? I've forgotten the  
15 answer.

16 CAPTAIN MISENCIK: Go ahead.

17 THE WITNESS: As I know, there's one case  
18 still standing regarding operations. That is, as  
19 encroached on this, and since it's still ongoing I  
20 would not be free to discuss it.

21 CAPTAIN MISENCIK: But to your recollection  
22 that's the only case that may impact Part 129  
23 operations?

24 THE WITNESS: Yes, this is the only one I'm  
25 remembering.

1           CAPTAIN MISENCIK: During the past -- during  
2 the past two years preceding the accident are you aware  
3 of any other FAA enforcement actions or letters of  
4 investigation that have been closed?

5           FIRST OFFICER CHUNG: Letter of investigation  
6 you say?

7           CAPTAIN MISENCIK: Yes.

8           THE WITNESS: As a company I don't have any  
9 recollections, but there have been instances of  
10 individual pilots violating procedures that have been  
11 warned by FAA.

12          CAPTAIN MISENCIK: What changes as a result  
13 of the accident have been initiated by Korean Air  
14 management or mandated by the KCAB or the FAA?

15          FIRST OFFICER CHUNG: Did you say after the  
16 accident?

17          CAPTAIN MISENCIK: Yeah, since the accident  
18 or as a result of the accident.

19          THE WITNESS: No actions from the FAA. As  
20 far as KCAB over two instances we've been conducted a -  
21 - by safety investigation or evaluation assessment by  
22 KCAB.

23          CAPTAIN MISENCIK: What type of changes did  
24 the KCAB want Korean Air to make?

1           THE WITNESS: Excuse me. Corrective actions  
2 recommended so far have been that the management crew  
3 have too much flying duty, been told to reduce that.  
4 Standard calls have been fortified, and non-precision  
5 approaches instead of lumping it together to  
6 individualize the non-precision approaches. And to  
7 specialize the captains by geographical sector.

8           CAPTAIN MISENCIK: Are there any changes  
9 being considered as a result of the accident by Korean  
10 Air that were not mandated by the KCAB?

11          THE WITNESS: After any significant or after  
12 all accidents or significant incidents we always review  
13 the matter to make appropriate changes. After the 801  
14 we have implemented the CRS system. As shown by the  
15 first -- our first witness today, the briefing  
16 procedures have been modified. This new modified  
17 checklist for the briefing includes -- excuse me, not  
18 includes but it is centered around the Jefferson  
19 approach chart. CFIT accident prevention concept has  
20 been introduced, and more specific training on crew  
21 duty divisions.

22          Up to now the English standard was a rating  
23 of three to enter into flight operations. We have  
24 raised that standard to a level for two for English  
25 education, and each month 30 people are entering this

1 additional education to get the rating to -- up to two,  
2 level two.

3 It's true that KCAB requested our improving  
4 the standard call-out procedures, but we -- on our own  
5 initiative we've also implemented better procedures  
6 since the first of this year. That's all.

7 CAPTAIN MISENCIK: I don't have any further  
8 questions.

9 CHAIRMAN FRANCIS: Can I -- we're -- we're  
10 drifting a lot here now. Can I ask from now on we make  
11 sure the questions that are being asked and the answers  
12 are not going over material we've already covered, that  
13 they're pertinent, that they're pointed? We're --  
14 we're taking an awful lot of time on this and a lot of  
15 it is becoming redundant and some of it isn't really  
16 pertinent.

17 CHAIRMAN FRANCIS: Malcolm, do you have  
18 questions?

19 DR. BRENNER: Yes, I do, sir.

20 On the CVR the captain made a comment,  
21 "Really sleepy, and they make us work up to maximum."  
22 Please respond to his comment.

23 THE WITNESS: It has been discovered that the  
24 three accident crew members had sufficient rest before  
25 the beginning of this flight. They had over 30 hours

1 of sufficient time to rest. That was for the pilot and  
2 the first officer. As far as the engineer had over 50  
3 hours to rest.

4 Physiologically speaking, when you are flying  
5 well past midnight by local standard it is obvious that  
6 people would be tired. I believe the accident captain  
7 expressed his state of tiredness forthrightly. Would  
8 that not give warning to the other two crew members to  
9 be on the look out for the captain falling asleep?  
10 Looking at the CVR since he performed every item on the  
11 checklist I don't believe he fell asleep at any point.

12 DR. BRENNER: Thank you, Mr. Chairman.

13 CHAIRMAN FRANCIS: KCAB?

14 MR. LEE: Thank you, Chairman.

15 CHAIRMAN FRANCIS: And we're going to  
16 continue with the interpretation in the front of the  
17 room.

18 (First Officer Chung continued to translate,  
19 translating both the questions and answers from Korean  
20 to English.)

21 (Mr. Lee began to ask his first question in  
22 Korean.)

23 CHAIRMAN FRANCIS: Could you -- could you  
24 give -- excuse me. Could you leave time for some  
25 interpretation? I don't -- I'm not sure we're going to

1 challenge his memory quite that much.

2 MR. LEE: As I've -- as we have asked Captain  
3 Lee this morning, we asked a question about the  
4 autocratic nature of maybe the captain, the first  
5 officer, and the other crew relationship, would it have  
6 had any impact on this accident flight. Please comment  
7 on whether this factor should be considered into the  
8 investigation.

9 THE WITNESS: I would be confident in my  
10 answer. I don't believe these crew members have  
11 particular problems with CRM.

12 MR. LEE: If you have reason for your  
13 answering in such confidence, please provide the  
14 reason.

15 THE WITNESS: After the accident we have  
16 testimony from a contract -- otherwise foreign pilots,  
17 captains that work for our company. They spoke about  
18 captain -- the accident captain to us as having  
19 excellent personal relationships in the cockpit.

20 As far as the first officer, he's a person  
21 that I know personally that I've had meals with at  
22 destination airports in one or two occasions. He has a  
23 -- a reasonable approach into doing everything. He was  
24 of the type that would not -- he would speak his mind  
25 if he felt that it was necessary.

1           As far as the flight engineer, he worked with  
2 me together in the same company for a long period of  
3 time. He's active about all things. He has leadership  
4 ability. He was bright and outgoing. He loves sports  
5 and he was just an active, overall good person.

6           No one in the company, to my knowledge, ever  
7 spoke of these three members' teamwork as a team --

8           (Pause)

9           MR. LEE: Thank you. That's all.

10          CHAIRMAN FRANCIS: Thank you.

11          (First Officer Chung continued to translate,  
12 translating the questions posed in English to Korean  
13 and Captain Park's responses from Korean to English.)

14          CHAIRMAN FRANCIS: FAA?

15          MR. DONNER: Thank you, Mr. Chairman.

16          Captain Park, you stated that since the  
17 accident your company has received reports of  
18 occasional DME outer marker and glide slope  
19 malfunctions.

20          THE WITNESS: That's true.

21          MR. DONNER: Did your crews pass this  
22 information to local FAA air traffic control  
23 authorities in Guam?

24          THE WITNESS: Since we don't fly to Guam  
25 anymore since the accident I have not taken personally

1 the steps to pursue this further.

2 MR. DONNER: Are you aware that it's a  
3 requirement of the Federal regulations to report such  
4 information?

5 THE WITNESS: Since the report was submitted  
6 to me within company -- internal company report that I  
7 was not able to get back to the pilots about the  
8 following actions.

9 MR. DONNER: Could -- would you refer, sir,  
10 to Exhibit #12A? 19.

11 (Pause)

12 MR. DONNER: On the right-hand side the radio  
13 communications have time 15:39 and 44 seconds. The  
14 approach controller told Korean Air 801 that the glide  
15 slope was unusable. Is that correct?

16 THE WITNESS: That's true.

17 MR. DONNER: And on the next page, page 20.  
18 At time 15:40 and zero seconds the first officer makes  
19 the statement "not usable."

20 THE WITNESS: Yes.

21 MR. DONNER: I believe, sir, that you stated  
22 that the approach controller did not tell the crew that  
23 the glide slope was unusable. Did I misunderstand you?

24 FIRST OFFICER CHUNG: Sir, would you repeat  
25 that question, please?



1           MR. DONNER: Yes. I believe I heard the  
2 captain say that the approach controller had not told  
3 the crew that the glide slope was unusable.

4           THE WITNESS: He did tell them.

5           MR. DONNER: I believe you also stated, sir,  
6 that the weather was worse than reported and had the  
7 crew known that the outcome might have been different?

8           THE WITNESS: Yes, I did say that.

9           MR. DONNER: Sir, do your crews fly  
10 differently if they anticipate a rain shower on the  
11 final approach than they would if they did not have  
12 that information?

13           FIRST OFFICER CHUNG: One more time, please?  
14 Would you repeat the question?

15           MR. DONNER: Would -- would your crew have  
16 flown the approach differently if they were told that  
17 there was rain on the final approach?

18           FIRST OFFICER CHUNG: Did you say rain or  
19 rain shower, sir?

20           MR. DONNER: I'll say rain.

21           THE WITNESS: Would that -- would they not  
22 have paid just a little more attention.

23           MR. DONNER: Thank you. I have no further  
24 questions.

1 CHAIRMAN FRANCIS: NATCA?

2 MR. MOTE: Thank you, Mr. Chairman.

3 I'd like to refer the Board of Inquiry and  
4 the witness to Exhibit 2F as in Foxtrot, please?

5 (Pause)

6 MR. MOTE: I refer specifically to the second  
7 paragraph. Approximately sixth sentence with regard --  
8 this is the Korean Air Company's record of the level  
9 three English test which was apparently taken by the  
10 flight crew of Korean Air 801, and I refer specifically  
11 to the portion which reads that "The ATC tests correct  
12 understanding and proper uses of ATC transmissions."  
13 Do you see that -- that section, Captain Park?

14 THE WITNESS: That is true.

15 MR. MOTE: I ask you, sir, Captain Park, if  
16 you have an opinion as to why since the crew of Korean  
17 Air 801 received an approach clearance with the  
18 standard terminology of "glide slope unusable" in  
19 addition to the NOTAM and ATIS information containing  
20 the outages, do you have an opinion as to why this crew  
21 may not have comprehended the fact that the glide slope  
22 was in fact not operational?

23 FIRST OFFICER CHUNG: He wanted me to ask you  
24 one more time your question.

1           MR. MOTE: Given the fact that the flight  
2 crew of Korean Air 801 was in receipt of the NOTAM,  
3 ATIS, and the standard American ATC approach clearance  
4 containing the term -- the standard ATC term "glide  
5 slope unusable," do you have an opinion, sir, as to why  
6 the flight crew may have -- may not have comprehended  
7 that the glide slope was in fact not operational?

8           THE WITNESS: I would agree with you that  
9 this -- the approach clearance was -- was standard.  
10 However, we cannot assume human beings to be perfect.  
11 Especially the first officer -- accident first officer  
12 during his Air Force received training in the U.S. Air  
13 Force in the United States.

14          MR. MOTE: Thank you, Captain. One  
15 additional question.

16          With reference to the phraseology issued in  
17 the approach clearance and the fact that the Korean Air  
18 flight crew had completed the Korean Air English tests  
19 with regard to ATC phraseology, do you think that  
20 Korean Air's English testing program is adequate to  
21 allow Korean Air crews to operate safely in United  
22 States air space?

23          THE WITNESS: I would not agree with that  
24 assessment since every employee is required by our  
25 company to enter with a minimum level of English

1 standard. And this level three standard that we set  
2 forth has undergone objective review by a native  
3 speaker --

4 FIRST OFFICER CHUNG: He referred to it as a  
5 foreign person.

6 (Resumption of translation)

7 THE WITNESS: -- as to its validity and its  
8 standard. I myself have been subjected to this level  
9 three.

10 MR. MOTE: Thank you, Captain. No further  
11 questions.

12 CHAIRMAN FRANCIS: Guam?

13 MR. DERVISH: No questions.

14 CHAIRMAN FRANCIS: Boeing Company?

15 MR. DARCY: No questions. Thank you.

16 CHAIRMAN FRANCIS: Barton?

17 MR. E. MONTGOMERY: Yes, Mr. Chairman. One  
18 question.

19 Captain Park, could you describe the sources  
20 of weather information available to the crew?

21 THE WITNESS: We receive predicted weather --  
22 forecast weather from the start of flight to the end.  
23 In flight they would receive weather information  
24 through the Volmet (ph) process -- updates. Once  
25 they're closer to -- close to the destination they

1 would receive weather data from the ATIS at the  
2 destination. But in tropical weather conditions where  
3 there's frequent weather changes, they should get  
4 special weather updates from the air traffic control  
5 available to them.

6 MR. E. MONTGOMERY: Thank you. One  
7 subsequent question.

8 In tropical conditions where there are --  
9 conditions are changing rapidly, do you make use of on-  
10 board systems to determine weather?

11 THE WITNESS: No, we would receive the  
12 information through ATC. In new aircraft with the ACAR  
13 system that would -- can get weather through that  
14 updating system.

15 MR. E. MONTGOMERY: Thank you, Mr. Chairman.

16 No more questions.

17 CHAIRMAN FRANCIS: Korean Airline?

18 CAPTAIN KIM: No questions.

19 CHAIRMAN FRANCIS: Mr. Feith?

20 MR. FEITH: Captain Park, I just want to  
21 follow up on one question that Mr. Donner had -- had  
22 alluded to earlier regarding the reporting of out-of-  
23 service navigation aids to the controller in Guam. Do  
24 you have a practice or a policy that encourages flight  
25 crews to report a navigational aid as being out of

1 service anywhere that you all fly, not just into Guam?

2 THE WITNESS: If the weather -- excuse me.  
3 If the equipment operation should prove to be different  
4 than what is expected then using the channels that I  
5 said before it would be reported to the appropriate  
6 people. If I look at most of our operating experiences  
7 most of the equipment have been found to be in -- in  
8 the order that it was reported -- that it was reported  
9 to have been operating in.

10 MR. FEITH: Prior to the accident  
11 approximately how many flights did you have going into  
12 Guam in a day?

13 THE WITNESS: I remember once a day prior to  
14 the accident. One a day.

15 MR. FEITH: Would Flight 801 have been the  
16 one a day flight?

17 THE WITNESS: Yes.

18 MR. FEITH: On -- on days prior to the  
19 accident had any other flight crews brought to your  
20 attention any problems with any of the navigational  
21 aids at Guam, including the glide slope?

22 FIRST OFFICER CHUNG: The -- not before --  
23 before the accident, but after the accident people come  
24 forward and said the -- it was true that the equipment  
25 was failing to operate and we did not report it were

1 the words.

2 MR. FEITH: Can you just repeat your answer,  
3 Steve?

4 THE WITNESS: But prior to the accident they  
5 did not report of this fact either to me or to the  
6 company. After the 801 accident at Guam and after the  
7 accident they came forward and told me that there were  
8 unreliable indications at Guam, but only after the  
9 accident.

10 MR. FEITH: Were those reports provided to  
11 you in writing or were they verbal?

12 THE WITNESS: It was a verbal report.

13 MR. FEITH: Could we get that information in  
14 writing and provide it to us? Because we were not  
15 aware of those reports.

16 THE WITNESS: Once I return I will direct the  
17 captain that I spoke with to make -- to recall what he  
18 said to me and make appropriate reports.

19 MR. FEITH: Thank you very much.

20 CHAIRMAN FRANCIS: Are we talking about the  
21 glide slope here or other pieces of equipment?

22 THE WITNESS: Glide slope.

23 FIRST OFFICER CHUNG: He was speaking of eth  
24 glide slope.

1 CHAIRMAN FRANCIS: Thank you.

2 MR. FEITH: Captain Park, there was earlier  
3 testimony regarding non-precision approaches and the  
4 fact that Korean Air trains the step-down on a non-  
5 precision approach if in fact the step-down procedure  
6 is charted. However, Korean Air knows that their line  
7 crews can on occasion make a constant-rate descent  
8 approach for basically passenger comfort. With the  
9 follow-up to that, is that not tacit approval by Korean  
10 Air since they know that their crews are doing that?

11 THE WITNESS: I believe I need to clarify  
12 your conceptual understanding of what we explained this  
13 morning. When Captain Lee spoke of the -- the -- on  
14 this matter this morning there were conditions attached  
15 to this statement he made. Those prior conditions were  
16 that visual conditions had to be ascertained first and  
17 that they met all the DME step-down fix requirements  
18 while they're performing the constant rate of descent.  
19 Of course, we emphasize the step-down procedure.

20 MR. FEITH: Is this a safe practice given the  
21 fact that you don't train for it but the crews are  
22 initiating this type of approach on their own?

23 THE WITNESS: In order to promote or  
24 ascertain safety we are definitely teaching the step-  
25 down technique. However -- however, the condition that



1 the runway is in sight for landing and once again the  
2 DME fixes on the approach chart goes -- step-downs are  
3 all satisfied. I do not think that this -- as long as  
4 those two conditions are met I do not believe this is  
5 an unsafe practice as such.

6 MR. FEITH: Given what you've just explained,  
7 all of the conditions that must be met, is there  
8 anything in writing that explains what you just  
9 explained to us?

10 FIRST OFFICER CHUNG: I believe he's saying  
11 no because this is an application of technique  
12 incumbent on each pilot. It's pilot technique. And we  
13 only teach the step-down is what he said.

14 MR. FEITH: As a senior manager at Korean Air  
15 I would like to have you describe to me your idea of  
16 the crew's performance on Flight 801 given your level  
17 of knowledge about the accident. And before you  
18 answer, let me just take this one step further and say  
19 did this meet Korean Air's policies and procedures and  
20 standard of operation? Yes or no. And if yes or no,  
21 give us the reason why.

22 THE WITNESS: If we just take the data as we  
23 have today that they strayed from our Korean Air  
24 standard procedures.

1 MR. FEITH: I have no further questions.

2 MR. CARISEO: No questions, Mr. Chairman.

3 MR. BERMAN: Captain Park, if these pilots  
4 were going to fly a constant descent, non-precision  
5 approach, how would you expect them to handle the mode  
6 control panel altitude selector?

7 FIRST OFFICER CHUNG: Excuse me. You mean  
8 the accident crew or it doesn't matter?

9 MR. BERMAN: Doesn't matter.

10 FIRST OFFICER CHUNG: Okay.

11 THE WITNESS: As a manager I always emphasize  
12 step-down procedures and I really don't want to answer  
13 this question, but I'll give you the best one I can.  
14 And in reference to the Guam Airport, of course.

15 First, you start at 2600 feet at Guam. Once  
16 the altitude is captured and it's put in the altitude  
17 hold mode, you would set 2000 on the window, which is  
18 the next altitude. I would require or request the  
19 first -- excuse me, the pilot not flying to continue to  
20 call out the DME for me. Once I crossed the DME in-  
21 bound for the 2000-foot restriction then I would  
22 descend down to 1440 feet. Once again I -- again, once  
23 I fixed -- crossed the restriction for the 1440, then I  
24 would set the MDA and call for the descent.

1           MR. BERMAN: So, you've described the ~~ste~~  
2 down procedure there.

3           THE WITNESS: This is not a step-down, merely  
4 rate maintaining, constant rate, yet making sure that  
5 we don't -- crossing restrictions. At no time will I  
6 allow a constant rate descent in this case.

7           MR. BERMAN: Do you believe a pilot flying a  
8 constant rate of descent approach might set the next  
9 lower altitude at an earlier time?

10          THE WITNESS: I do not think so.

11          MR. BERMAN: Have you ever seen in training  
12 operations or in line flying operations when a pilot is  
13 flying a non-precision approach step-down method where  
14 the pilot will set the mode control panel altitude down  
15 to the next step-down altitude too soon?

16          THE WITNESS: I have personally not seen it.

17          MR. BERMAN: Based on information we have in  
18 this country about air carrier pilot training, would  
19 you please query your air carrier checkers and trainers  
20 and provide this information to us for the record?

21          FIRST OFFICER CHUNG: I understand this is  
22 based on United States?

23          MR. BERMAN: Based on some United States  
24 experience where we see this happening during training  
25 at least, please inform us from a further survey of

1     your training and checking pilots whether this has been  
2     known to happen during your training.

3             THE WITNESS: I understand your request and  
4     it will be complied with.

5             MR. BERMAN: Thank you. One more question on  
6     this descent. When you fly this approach, would you  
7     use vertical speed mode or a pitch mode?

8             THE WITNESS: On the Classic 747 please  
9     clarify what you mean by the pitch mode? I understand  
10    the VS mode. What do you mean by the pitch mode?

11            MR. BERMAN: A pitch hold mode.

12            THE WITNESS: I have not heard of that mode  
13    before.

14            MR. BERMAN: So you would use a vertical  
15    speed mode?

16            THE WITNESS: That's true.

17            MR. BERMAN: Okay. Thank you.

18            You've testified about pilots' training  
19    percentages who failed to complete check rides. How  
20    many and what percentage of pilots who are upgrading  
21    from first officer to captain fail completely to make  
22    their upgrade and do not make the captain position?

23            THE WITNESS: So far this is not an accurate  
24    figure to my knowledge, but it's about three to four  
25    percent.

1           MR. BERMAN: And of those pilots who fail to  
2 achieve the upgrade, what does Korean Air do with them?  
3 Do they maintain their previous first officer position  
4 or what?

5           THE WITNESS: We do not treat this matter  
6 lightly. There is a certain set procedure that this  
7 person would be subjected to and all the evaluation  
8 team members would gather together for a fair  
9 evaluation of the individual. First, they would look  
10 into the exact reason why that person came to fail the  
11 program. Once this exact analysis is over, they -- the  
12 person would be handed to --

13          FIRST OFFICER CHUNG: Flight Operations  
14 personnel department would be my best shot at that.

15          THE WITNESS: This is -- a board is what I  
16 should call that. A board at that point with the  
17 recommendation from the evaluation team would make the  
18 determination whether the person will continue as a  
19 flyer or go to a non-flying status and whether he's  
20 appropriate for a particular type of aircraft.

21          MR. BERMAN: Captain Park, have you been  
22 involved in the decisions at Korean Air about the  
23 procedure for responding to GPWS alerts?

24          FIRST OFFICER CHUNG: Would you repeat that  
25 one more time, please?

1           MR. BERMAN: Have you been involved in the  
2 decisions about what the procedures will be for  
3 responding to GPWS alerts?

4           THE WITNESS: I did not participate in that.

5           MR. BERMAN: You testified earlier that the  
6 KCAB said that Korean Air was to individualize its non-  
7 precision approaches. What does that mean?

8           THE WITNESS: Up to now the non-precision --  
9 the general title was left up to the instructor to  
10 decide whether this would be a -- NDB approach, a  
11 localizer approach, and VOR DME approach and that would  
12 satisfy that. But since the change the -- the  
13 procedures will specify whether this will be a  
14 localizer approach, an NDB approach, or a VOR DME  
15 approach.

16          MR. BERMAN: And just to clarify, this is in  
17 training now?

18          THE WITNESS: Yes, that is training.

19          MR. BERMAN: Okay. Thank you very much. No  
20 further questions.

21          CHAIRMAN FRANCIS: I'd like to ask a  
22 clarification on one question.

23                I believe that the captain said that Korean  
24 Airlines does not keep track -- any record of their  
25 missed approaches?

1 THE WITNESS: That is true.

2 CHAIRMAN FRANCIS: I -- I guess this is a  
3 comment on my part. I would just say that -- and I'm  
4 referring here to the -- to the checklist from the  
5 Flight Safety Foundation which is part of the package  
6 that -- that your airline now has. In the section  
7 under "Company Management," there is an item which  
8 says, "Places no negative connotation on a diversion or  
9 missed approach." This gets at the highest points for  
10 this. This -- that's half of -- if you can translate  
11 that, and then I'm not asking for -- for an answer. If  
12 you just translate that.

13 And -- and I would say that while I  
14 understand the -- the reason that the captain gave that  
15 you don't keep track of -- of missed approaches I think  
16 that if we're going to be in an environment where we're  
17 preempting -- preventing accidents before they happen  
18 rather than doing accident investigations such as we  
19 are here that it's incumbent upon airlines to develop a  
20 trust and a corporate culture attitude so that it's  
21 clear to their crews that there's not punitive -- there  
22 are not punitive connotations to going around.

23 (Captain Park began to respond in Korean.)

24 CHAIRMAN FRANCIS: Can I just finish? Be --  
25 because -- and he doesn't have to answer this. Because

1 I -- I think that -- that the value of knowing how many  
2 times people go around, where they're going around, and  
3 why they're going around, if you can do this in a non-  
4 punitive context is enormously valuable in terms of  
5 preventing the accident. So, he might be interested in  
6 talking to some of the airlines around the world that  
7 do have very highly developed programs in this area.

8 (Captain Park responded in English.)

9 THE WITNESS: I'd like to comment some more,  
10 sir.

11 FIRST OFFICER CHUNG: May he make a comment  
12 in closing?

13 CHAIRMAN FRANCIS: Absolutely. Sure.

14 (Resumption of translation)

15 THE WITNESS: As a person representing the  
16 1600 flight operations crew members for Korean Airlines  
17 I would like to make this statement to the chairman --  
18 Mr. Chairman and everyone present here for these --  
19 this Safety Board investigation.

20 Looking back upon this accident we feel that  
21 most of our management up to now has been in the level  
22 of perhaps too short-term, short-sided, and superficial  
23 in its nature. We from this point on for the purpose  
24 of ascertaining flight -- safe flight operations we  
25 plan to make long-term plans and spare no resources in



1     ascertaining this final objective of flight safety.  
2     Accordingly, we will adjust our management systems and  
3     invest all the more heavily into training and program  
4     development.

5             For the benefit of everyone here, I would  
6     like to say there's -- starting on the 1st of April the  
7     company has -- is under contract to receive expert  
8     consultation of comprehensive nature from a well-known  
9     and well-respected international organization.

10            And for everyone who contributed into the  
11    investigation and all the processes up to now I would  
12    like to say -- acknowledge our word of thanks and  
13    gratitude.

14            To the family members of the deceased we'd  
15    like to pass on from the flight crew members of Korean  
16    Airlines our word of condolences.

17            Thank you very much.

18            CHAIRMAN FRANCIS: We appreciate very much  
19    the spirit of your remarks, and I'm sure that I can  
20    speak on behalf of -- of everyone here to -- in saying  
21    that if any of us in any way can be of help to you in  
22    this program we certainly stand ready to do so.

23            Thank you, sir, and you're -- you're released  
24    from your testimony.

1 THE WITNESS: Thank you very much.

2 (End of translation)

3 CHAIRMAN FRANCIS: We will now take a break.

4 It's 4:20 by my watch. Why don't we come back in 20  
5 minutes at 20 to five and we'll continue with the next  
6 witness.

7 (Whereupon, a brief recess was taken.)

8 CHAIRMAN FRANCIS: Could we start again,  
9 please?

10 The next witness will be Mr. Juan Rosario,  
11 the director of Guam Civil Defense.  
12 Whereupon,

13 JUAN ROSARIO  
14 was called as a witness, and first having been duly  
15 sworn, was examined and testified as follows:

16 TESTIMONY OF

17 JUAN ROSARIO

18 DIRECTOR

19 GUAM CIVIL DEFENSE

20 AGANA, GUAM

21 MR. SCHLEEDE: I don't believe you'll need  
22 the headset right now, sir.

23 Please give us your full name and business  
24 address for the record?

1           THE WITNESS: My name is Juan B. Rosario, and  
2 I live in Chalampago (ph), Guam

3           MR. SCHLEEDE: And what is your current  
4 position with the Government of Guam?

5           THE WITNESS: I'm currently the director of  
6 Civil Defense, Guam Emergency Service Office.

7           MR. SCHLEEDE: Could you please give us a  
8 brief summary of your education and experience that  
9 brought you to this position?

10          THE WITNESS: My -- prior to January 17,  
11 1995, my educational and experience are in the business  
12 and finance in the public and private sector. After  
13 the January 17 I was appointed by the governor --  
14 current governor -- the director of Civil Defense.

15          MR. SCHLEEDE: Thank you very much. Mr.  
16 Hammack will continue.

17          MR. HAMMACK: Thank you.

18                 Thank you for being with us, Mr. Rosario.

19                 Can you briefly describe your duties and  
20 responsibilities as civil defense director?

21          THE WITNESS: I am responsible for the  
22 everyday, daily activity in civil defense both in  
23 training, management, and budget for that matter also.

24          MR. HAMMACK: Thank you. Can you tell us how  
25 and when you were notified of this accident?

1           THE WITNESS: On August 6 approximately 2:18  
2 in the morning my duty officer, Bennett Cabrera, called  
3 me and advised me that there was a plane went down at  
4 Nimitz Hill. He didn't -- wasn't sure exactly where it  
5 is.

6           MR. HAMMACK: What did you do after that?

7           THE WITNESS: I immediately jumped out of bed  
8 and got into my clothes and went down with him. He  
9 stopped by and picked me up because we both live in the  
10 same villitz.

11          MR. HAMMACK: What time did you arrive at the  
12 accident?

13          THE WITNESS: I was at the gate approximately  
14 2:34 in the morning.

15          MR. HAMMACK: When you refer to the gate --  
16 can we have Exhibit 16I, page 2, please?

17               (Pause)

18          THE WITNESS: Yes.

19          MR. HAMMACK: Do we have the pointer that Mr.  
20 Rosario -- there you are.

21               (Pause)

22          THE WITNESS: I believe that's the -- I  
23 believe that's the gate that I went and -- when I got  
24 there in the morning that was the gate.

1           MR. HAMMACK: Do we have a focus problem with  
2   that or is it me?

3           THE WITNESS: Say again, sir?

4           MR. HAMMACK: For Teddy. Do we have a focus  
5   problem?

6           (Pause)

7           MR. HAMMACK: Okay.

8           (Pause)

9           THE WITNESS: That -- that's the gate.

10          MR. HAMMACK: Okay. Can you tell us about  
11   your actions and observations once you arrived at the  
12   gate?

13          THE WITNESS: When I got there -- actually, I  
14   was with my duty officer. When we got there I met with  
15   the police chief Gil Regist (ph), and because of the  
16   situation there existing I immediately took control at  
17   the gate.

18          (Pause)

19          MR. HAMMACK: Can we have the lights back up,  
20   please?

21          (Pause)

22          MR. HAMMACK: When you took control at the  
23   gate, what were your responsibilities?

24          THE WITNESS: The situation there at that  
25   time was very chaotic simply because there was a lot of

1 people hanging around wanting to go into the -- to the  
2 accident site. And so, it was necessary to take  
3 control and not only necessary to take control but you  
4 -- we set up the command post because my responsibility  
5 is to coordinate all the Government of Guam resources  
6 in -- in delivering the needed supplies, manpower to  
7 the accident site to -- you know, like the volunteers,  
8 the triage team. Everybody wanted to get down there,  
9 so we just simply had to control it.

10 MR. HAMMACK: Your function at the gate, was  
11 that more of a control of the resources or were you in  
12 overall command of the entire rescue operation?

13 THE WITNESS: No, sir. The -- my role simply  
14 is with that command post is for me to coordinate, like  
15 I said, the resources of -- of Guam. What I did in  
16 this incident, I activated the Emergency Operations  
17 Center, which is at Civil Defense. By operating the  
18 Emergency Operations Center I have activated all the  
19 government agencies that are involved as responders.  
20 It is my job to receive whatever is requested from the  
21 incident site to deliver that resource.

22 MR. HAMMACK: By the incident site you mean  
23 down at the wreckage?

24 THE WITNESS: That's correct, sir.

1           MR. HAMMACK: Okay. And to coordinate the  
2 resources of the Government of Guam, you did that from  
3 the command post there at the gate?

4           THE WITNESS: That's correct, sir.

5           MR. HAMMACK: How did you do that? By radio  
6 or --

7           THE WITNESS: We have -- I have a cell phone.  
8 And when I got there I immediately called my deputy  
9 director and I told him to go down to the Civil Defense  
10 and activate the Emergency Operations Center and  
11 telephone all the responders -- the response activity  
12 coordinators and to show up at the Emergency Operations  
13 Center.

14           And one of those activation was the Guam  
15 Telephone Authority, which I requested that they show  
16 up and -- and put in two land lines and deliver more  
17 phones for, you know, when it's needed.

18           MR. HAMMACK: Are you aware of ~~any~~ problems  
19 with notification of emergency forces?

20           THE WITNESS: In what -- in what context?

21           MR. HAMMACK: The -- the dispatch of  
22 emergency services.

23           THE WITNESS: I --

24           MR. HAMMACK: Any -- any problems with --

1 THE WITNESS: Not -- not that I know of at  
2 that point in time.

3 MR. HAMMACK: Are you aware of any problems  
4 in locating the wreckage?

5 THE WITNESS: At first, yes. But after  
6 driving up the hill, Nimitz Hill, I was aware where it  
7 was already then, so I -- I knew where to go from that  
8 point on.

9 MR. HAMMACK: Well, I'm -- I'm thinking about  
10 initially when you were first notified of an accident.  
11 Did you -- were you advised then of where the wreckage  
12 was?

13 THE WITNESS: No, sir. Other than Nimitz  
14 Hill.

15 MR. HAMMACK: You were advised that it was on  
16 Nimitz Hill --

17 THE WITNESS: Yes.

18 MR. HAMMACK: -- initially?

19 THE WITNESS: I was advised, but the exact  
20 location I was not advised.

21 MR. HAMMACK: Are you aware of any problems  
22 gaining access to the wreckage?

23 (Pause)

24 MR. HAMMACK: By the emergency services?



1 THE WITNESS: From the gate side?

2 MR. HAMMACK: Yeah. From the gate to the  
3 wreckage itself.

4 THE WITNESS: Well, when I got there, like I  
5 said, there was -- there were problems simply because  
6 there was a lot of people. There was about 300 people  
7 there milling around. And at that time a lot of the  
8 responders then were coming in. And I -- in order to  
9 control it we had to identify from the incident site  
10 what is needed. And basically, the first call was for  
11 triage teams, doctors, and volunteers, and those are  
12 the people that we let in first.

13 MR. HAMMACK: Okay. We'll get back to that a  
14 little bit more in a minute.

15 Can you tell me who was in overall charge of  
16 the rescue operations?

17 THE WITNESS: At that time when I went there  
18 I was advised that Ciriaco -- Chief Ciriaco Sanchez was  
19 the incident commander at the -- at the accident site.

20 MR. HAMMACK: And where -- where exactly was  
21 Chief Sanchez at that time?

22 THE WITNESS: I don't know the exact location  
23 where he was at at that point in time. I only know  
24 that he was at that site.

1 MR. HAMMACK: He was down at the wreckage?

2 THE WITNESS: Right.

3 MR. HAMMACK: Yeah, that's what I wanted to  
4 know.

5 (Pause)

6 MR. HAMMACK: From your position at the  
7 command post, were you able to -- did you have  
8 communications with Chief Sanchez?

9 THE WITNESS: Yes. I did on a couple of  
10 occasion, but then the communication between that side  
11 was transferred to one of the personnel there at the  
12 gate side, and he relays the request to me 'cause I had  
13 my hands full with the -- with the gates and the other  
14 stuff there, so.

15 MR. HAMMACK: This was another person at the  
16 gate with you?

17 THE WITNESS: Yes.

18 MR. HAMMACK: Okay. Did you have the ability  
19 to communicate with other jurisdictions, mutual aid  
20 resources?

21 THE WITNESS: Yes, I do. Through the  
22 Emergency Operations Center.

23 MR. HAMMACK: So, how -- how would that work,  
24 if you wanted, for example, to get a hold of Navy  
25 personnel?

1           THE WITNESS: Well, my jurisdiction really  
2       lies within the Government of Guam, so the -- the only  
3       communication that I would have in terms of resources  
4       would be through the Guam, and that would be through  
5       the Civil Defense Emergency Operations Center.

6           MR. HAMMACK: So, to perform your functions  
7       you used your cell phone to -- to contact your people?

8           THE WITNESS: Right. I -- as I --

9           MR. HAMMACK: They --

10          THE WITNESS: -- said earlier that my deputy  
11       director was manning the Emergency Operations Center.

12          MR. HAMMACK: Okay.

13          (Pause)

14          MR. HAMMACK: Incommunicating with Chief  
15       Sanchez down at the accident -- at the wreckage, did he  
16       keep you informed as to what resources he needed to --  
17       to be allowed into -- into the -- through the gate?

18          THE WITNESS: Yes, he did.

19          MR. HAMMACK: Okay.

20          (Pause)

21          MR. HAMMACK: Was it you or -- or Chief  
22       Sanchez who -- who made decisions such as rescue and  
23       evacuation of personnel, that sort of thing?

24          THE WITNESS: I can't really say. I know I  
25       did not make that decision, but I don't know if that

1 was -- you might have to ask Chief Sanchez that  
2 question.

3 MR. HAMMACK: Okay.

4 (Pause)

5 MR. HAMMACK: Did you observe any  
6 difficulties with access or congestion that interfered  
7 with emergency vehicle access to the site?

8 THE WITNESS: I did observe that there was  
9 some problems in the access simply because everybody  
10 wants to go in, but every time I called the incident  
11 site when I asked them if they would need a particular  
12 responder they would say not at this point.

13 MR. HAMMACK: Well, I'm -- I'm thinking about  
14 when the very first people got there I understand there  
15 was a piece of pipe across the road?

16 THE WITNESS: I'm not -- well, I may be aware  
17 of that, but I didn't actually see that 'cause that --  
18 it was quite a bit of distance from that site to the  
19 gate and I was concentrating on the gate.

20 MR. HAMMACK: Okay. You didn't get that far?

21 THE WITNESS: No.

22 MR. HAMMACK: Okay.

23 (Pause)

24 MR. HAMMACK: In -- you don't need to refer  
25 to it, but in Exhibit 16 Alpha there's a statement that

1 the Government of Guam had a mobile command post but it  
2 was not used. Is that true?

3 THE WITNESS: That's correct, sir.

4 MR. HAMMACK: I understand that was out of  
5 service and that sometime after the accident the  
6 Federal Emergency Management Agency, the local Guam  
7 representative said they were going to help you upgrade  
8 that thing. Has there been any progress on that?

9 THE WITNESS: Yes, and incidentally, the  
10 director for the Pacific Area of Federal Emergency  
11 Management Agency was along with me at that point at  
12 the gate and he knew that's what happened. And he did  
13 promise that he would take care of the mobile command  
14 post. And that is now being addressed at this point.

15 MR. HAMMACK: Okay. Prior to the accident  
16 have -- did you have any mutual aid agreements with the  
17 other resources on the island, Navy, Coast Guard, Air  
18 Force?

19 THE WITNESS: We have a mutual of  
20 understanding agreement with the Air Force, but we did  
21 not have one with the Navy.

22 MR. HAMMACK: How about the Coast Guard?

23 THE WITNESS: Neither the Coast Guard.

24 MR. HAMMACK: Okay. Prior to the accident  
25 did you conduct any joint disaster drills or

1       communications exercises with any of these  
2       organizations?

3               THE WITNESS:   We did with the Airport  
4       Authorities.   We did a -- a full-scale exercise.   That  
5       was in April of the same year that the incident  
6       happened.   And it went well.

7               MR. HAMMACK:   Where did that take place?

8               THE WITNESS:   In the airport proper.

9               MR. HAMMACK:   On the airport?

10              THE WITNESS:   Yes.

11              (Pause)

12              MR. HAMMACK:   As you look back on the  
13       accident and the planning that you had, did you see any  
14       -- the need for any improvements in any of your  
15       emergency planning?

16              THE WITNESS:   Yes, sir.   We have identified a  
17       few, and one of them was, of course, we initiated a --  
18       Civil Defense initiated a -- a committee whereby Navy,  
19       Coast Guard, Air Force, and Gov Guam come up with a  
20       mutual of understanding where all the participant will  
21       sign this agreement.   And the governor's already given  
22       his -- his okay on this MOU, and I understand that  
23       Admiral Jansack also may have -- be considering this at  
24       this point.

1           The four -- the four groups that developed  
2   this MOU have signed off on it. In fact, I think I  
3   gave you a copy of it.

4           MR. HAMMACK: Will this agreement include a  
5   provision for emergency drills involving all these  
6   organizations?

7           THE WITNESS: Yes.

8           MR. HAMMACK: Will it involve improving  
9   communications among all the agencies?

10          THE WITNESS: Yes.

11          (Pause)

12          MR. HAMMACK: Will your pre-planning -- I  
13   don't want to get into too much detail, but aside from  
14   the -- the general communications and -- and the  
15   general planning for the different possible threats you  
16   have on the island, and our particular concern is  
17   aviation, will you identify things such as the approach  
18   and departure routes of aircraft, that sort of thing  
19   since access was a problem here?

20          THE WITNESS: That's a hard one to --

21          MR. HAMMACK: Well, perhaps --

22          THE WITNESS: This -- this much I can say,  
23   that in -- in our Guam Emergency Plan we have  
24   identified that we do need to plan an exercise with the  
25   Airport Authority, and we have already identified also

1     that not only on the proper airport but also outside of  
2     the airport. This will become part of the Emergency  
3     Plan for Guam.

4             MR. HAMMACK: Did -- you mentioned a -- the  
5     drill you had on the airport. Have you ever had a --  
6     an aviation-type drill off the airport?

7             THE WITNESS: I don't believe so.

8             MR. HAMMACK: Okay. Do you have an agreement  
9     between the Government of Guam and the Airport  
10    Authority, a mutual aid agreement?

11            THE WITNESS: We do now, I believe.

12            MR. HAMMACK: Okay.

13            (Pause)

14            MR. HAMMACK: I understand you weren't here  
15    yesterday, but we had some testimony from the -- a  
16    couple of the air traffic controllers and they were  
17    asked what their response would be if they -- if they  
18    knew for sure that there was an aircraft accident off  
19    the airport. And my recollection is that they  
20    responded that they would call the Coast Guard or they  
21    would call the -- the crash crew on the airport. What  
22    would your preference be if -- if -- if an air traffic  
23    controller on the airport knew that an airplane had  
24    crashed off the airport? What action would you like  
25    them to take?



1 THE WITNESS: My preference?

2 MR. HAMMACK: Yes.

3 THE WITNESS: Under the Guam Emergency Plan,  
4 911. Emergency 911 is the only way that you can notify  
5 on -- on an emergency.

6 MR. HAMMACK: Is that something that you'll  
7 look into after this?

8 THE WITNESS: Yes.

9 MR. HAMMACK: Okay. Mr. Chairman, that's all  
10 I have.

11 CHAIRMAN FRANCIS: FAA?

12 MR. DONNER: No questions, Mr. Chairman.

13 CHAIRMAN FRANCIS: NATCA?

14 MR. MOTE: Thank you, Mr. Chairman. No  
15 questions.

16 CHAIRMAN FRANCIS: KCAB?

17 MR. LEE: Thank you, Chairman.

18 (The following is a verbatim transcript of  
19 the English translation of Mr. Lee's questions posed in  
20 Korean.)

21 MR. LEE: Let me just double check several  
22 issues involved here. The Guam Airport Emergency Plan,  
23 the applicable range of that plan is limited to the  
24 airport premises proper. If an aircraft -- if an  
25 accident involving an aircraft takes place outside the

1 airport premises proper then what kind of emergency  
2 plan do you have and use?

3 THE WITNESS: That has yet to be developed at  
4 this point. I will state that outside of the airport  
5 proper in this case in the absence of any SOP regarding  
6 -- from the Airport Authority I would say Civil Defense  
7 would work with the Airport Authority in responding to  
8 that emergency.

9 MR. LEE: According to Annex 14 of -- Chicago  
10 Conventions, the airport emergency plan covers both the  
11 airport premises proper and the areas outside of the  
12 airport premises. Do you -- are you saying that you  
13 have a plan to cover these areas outside the airport  
14 premises proper?

15 THE WITNESS: Yes. Under the Civil Defense,  
16 the Guam Emergency Plan, it covers for all types of  
17 disaster. And in this instance, in case of an aviation  
18 disaster, we would have to bring in the Airport  
19 Authorities and all the agencies that will respond to  
20 that emergency.

21 (Pause)

22 MR. LEE: At the command post of the accident  
23 site or accident area, the command authority was  
24 transferred from the Civil Defense to the Navy  
25 according to one of the exhibits. The -- were there

1 any problems arising from the change of the guards, the  
2 transfer of the command authority?

3 THE WITNESS: No, sir.

4 MR. LEE: The -- the Guam Fire Department  
5 chief who went to the accident site and the Federal  
6 fire chief and Anderson Air Force Base fire chief, they  
7 are testing -- testifying that they did not receive any  
8 instructions from you as to the fire extinguishing job  
9 or rescue operations. Was that the case?

10 THE WITNESS: No, I did not receive any  
11 instruction and I am not -- I am not the person to give  
12 that kind of an instructions.

13 MR. LEE: That makes me wonder who was the  
14 person in charge at the accident site?

15 THE WITNESS: I've already stated that, that  
16 during the time that Gov Guam responded the incident  
17 commander at the accident site is Chief -- Deputy Chief  
18 Ciriaco Sanchez until the Navy took over.

19 MR. LEE: Following this accident, following  
20 or in the wake of this accident, was there any actions  
21 taken to improve the command structure?

22 THE WITNESS: Yes. I've stated that under  
23 the MOU that we have jointly formulated with the Navy,  
24 the Coast Guard, and the Air Force Gov Guam will  
25 receive the incident command system training, unified

1 system -- unified command system training by the -- by  
2 the Coast Guard beginning as soon as we implement that  
3 MOU.

4 MR. LEE: Thank you very much.

5 (End of translation)

6 CHAIRMAN FRANCIS: Guam?

7 MR. DERVISH: Thank you, Mr. Chairman. I  
8 have a few questions.

9 Upon arriving at the scene, Mr. Rosario, was  
10 there a question as to whether the aircraft had crashed  
11 on Federal or local property?

12 THE WITNESS: There was a question, yes.  
13 There was a question, but the answer didn't come until  
14 much later.

15 MR. DERVISH: And what was that answer?

16 THE WITNESS: 11:30 in the morning I was -- i  
17 was informed that it is Navy property.

18 MR. DERVISH: And has that decision changed  
19 at all?

20 THE WITNESS: To my knowledge, on my opinion,  
21 I think that has changed, yes.

22 MR. DERVISH: So you're saying it is Navy  
23 property?

24 THE WITNESS: I'm saying that the -- the --  
25 the incident site I believe is now Gov Guam property or

1     have been Gov Guam property. But the gate site is Navy  
2     property.

3             MR. DERVISH: Okay. So where the plane went  
4     down is Gov Guam property?

5             THE WITNESS: I believe that's the --

6             MR. DERVISH: Okay. Thank you.

7             THE WITNESS: -- situation, yes.

8             MR. DERVISH: When you did give command of  
9     the command post over to the Navy, what did you do with  
10    your log book?

11            THE WITNESS: When I arrived at the site in  
12    the morning, my duty officer had initiated log book.  
13    And only -- only -- not only that, we did have an easel  
14    board where we identified statistics. When my command  
15    was terminated 11:30 by the admiral, the logs were kept  
16    by the guards with the Navy. So, from that point on up  
17    I believe it became the Navy's log book.

18            MR. DERVISH: Has that log book ever been  
19    returned to you?

20            THE WITNESS: No, sir.

21            MR. DERVISH: Once again, what time did you  
22    arrive there?

23            THE WITNESS: 2:30 in the -- 2:34 in the  
24    morning.

1           MR. DERVISH: Could you describe the weather  
2 and light conditions at the scene when you arrived?

3           THE WITNESS: If I remember correctly, I  
4 believe it was drizzling off and on. I was kind of  
5 damp with a few drizzles here and -- here and there.

6           MR. DERVISH: And the light?

7           THE WITNESS: The light was very dark.

8           MR. DERVISH: Was it too dark to see into the  
9 crash area?

10          THE WITNESS: Yes. Very dark. Cannot see  
11 the crash site.

12          MR. DERVISH: Was there any artificial light  
13 brought to the scene?

14          THE WITNESS: I believe later they did  
15 transport some light over there. I wasn't sure what  
16 type of lighting that they brought.

17          MR. DERVISH: And what time would that have  
18 been?

19          THE WITNESS: I'm not sure on the -- on the  
20 time element there.

21          MR. DERVISH: And this artificial light, was  
22 it sufficient to light up the area?

23          THE WITNESS: I -- I don't know that answer.  
24 I was not there.

1           MR. DERVISH: I understand that you've been  
2 the director for two and a half years. How many  
3 airport exercises have you had in two and a half years?

4           THE WITNESS: I've been a director three  
5 years. Correction on that.

6           MR. DERVISH: Okay. Sorry.

7           THE WITNESS: Twice we've had tabletop  
8 exercise and one full-scale exercise.

9           MR. DERVISH: And how many are you required  
10 to have by the FAA?

11          THE WITNESS: I believe one tabletop every  
12 year and one full-scale exercise every three years.

13          MR. DERVISH: So you have complied with the  
14 FAA regulations?

15          THE WITNESS: That's correct, sir.

16          MR. DERVISH: Bearing in mind that because of  
17 Guam's unique situation, military tours are sometimes  
18 only two years, do you think it would be better to hold  
19 an exercise every two years except -- instead of every  
20 three years?

21          THE WITNESS: That would be my  
22 recommendation, yes.

23          MR. DERVISH: Will you make that  
24 recommendation?

1 THE WITNESS: Yes, I will.

2 MR. DERVISH: The overcrowding that occurred  
3 at the gate, was there a staging area -- staging area  
4 besides the one at the gate?

5 THE WITNESS: Later on I believe there was  
6 further back toward the main highway, I believe, was  
7 another staging area. You have to understand that when  
8 I activated the Emergency Operations Center I also  
9 activated the Port Authority, and I had to have them  
10 bring those large reefer trucks and they were there.  
11 And then also because of the military's Humvees coming  
12 in and responding the area where the gate is, outside  
13 the gate was very, very congested. And those are the  
14 kind of thing we encountered during the operation.

15 MR. DERVISH: One of the questions that was  
16 asked of you was who was in charge. Were you in charge  
17 of the military resources that were at the scene?

18 THE WITNESS: No, sir.

19 MR. DERVISH: Who was in charge of the  
20 military resources?

21 THE WITNESS: I don't know that one. I don't  
22 know the answer to that one.

23 MR. DERVISH: Was there a military  
24 representative at the command post?



1           THE WITNESS: Other than the military guards  
2 that were there --

3           MR. DERVISH: How about officers? Any high-  
4 ranking officers there?

5           THE WITNESS: After 11:30 there was one.

6           MR. DERVISH: Okay. How about before 11:30?

7           THE WITNESS: Before?

8           MR. DERVISH: Yes.

9           THE WITNESS: I don't believe so. I'm not  
10 sure. I -- I -- I really cannot say for sure. I don't  
11 remember that part.

12          MR. DERVISH: Did you happen to see Admiral  
13 Jansack there?

14          THE WITNESS: I saw him on his way out, yes.  
15 When he relieved me of the command post.

16          MR. DERVISH: Aside from the recommendations  
17 you've made and the improvements you plan, are there  
18 any other improvements that you want to tell us about?

19          THE WITNESS: Well, of course, the general --  
20 the Guam Emergency Plan is right now under revision,  
21 and we've targeted the date of September 30th of this  
22 year to -- to implement those with all those different  
23 annexes to include the Guam Airport Authority and also  
24 hopefully to include the MOU that will be signed with  
25 the governor, Admiral Jansack, and Air Force Colonel

1 Hodges, and Captain Asaro (ph) of the Coast Guard.

2 This is also in partnership with the Federal  
3 Emergency Management Agency. We have an agreement that  
4 gives us a -- we do our training in concert with their  
5 requirements. So, our -- our role in Civil Defense is  
6 preparedness, response, and recovery and mitigation.  
7 Those are the four items that we do, and it covers all  
8 types of disaster.

9 MR. DERVISH: Okay. Will you include first  
10 responder training and initiatives in there?

11 THE WITNESS: Yes.

12 MR. DERVISH: Very good. Thank you. I have  
13 no other questions.

14 CHAIRMAN FRANCIS: Okay. I inadvertently  
15 called you out of turn. I meant to have you last.  
16 We'll go to the other parties and if you have an  
17 additional question or two that you'd like to ask at  
18 the end --

19 MR. DERVISH: Thank you, Mr. Chairman.

20 CHAIRMAN FRANCIS: -- free to do so.

21 Boeing Company?

22 MR. DARCY: The Boeing Company has no  
23 questions, Mr. Chairman.

24 CHAIRMAN FRANCIS: Barton?

1 MR. E. MONTGOMERY: No questions, Mr.  
2 Chairman.

3 CHAIRMAN FRANCIS: Korean Air?

4 CAPTAIN KIM: No questions.

5 CHAIRMAN FRANCIS: Guam? Get another shot.

6 MR. DERVISH: I'm afraid I'm through with my  
7 list. Thank you.

8 CHAIRMAN FRANCIS: Thanks.

9 Mr. Feith?

10 MR. FEITH: Just a couple. Just so that I'm  
11 clear for the record today -- I got a little confused.

12 You arrived on scene and about 11:30 you were  
13 apparently relieved of command by the admiral?

14 THE WITNESS: Yes, sir.

15 MR. FEITH: What was that based on?

16 THE WITNESS: Based on the premise that he --  
17 that -- that the in -- incident site is -- is Navy  
18 property.

19 MR. FEITH: Who made that determination?

20 THE WITNESS: It was Admiral Jansack.

21 MR. FEITH: Was there any questioning of  
22 that?

23 THE WITNESS: No, because, see, the  
24 indication is that it is Gov -- Navy property because  
25 the gate is Navy property. That I have no question.

1 And by virtue of that I assumed that it is Navy  
2 property.

3 MR. FEITH: How has it been resolved since  
4 then?

5 THE WITNESS: I am -- that -- that has been  
6 resolved, I believe, up on the upper echelon of  
7 management, not -- not with me.

8 MR. FEITH: I'm just wondering how it was  
9 made -- the determination was made that it's no longer  
10 Navy property.

11 THE WITNESS: I'm not sure, but I believe  
12 they may have gone to Land Management to -- to research  
13 the area.

14 MR. FEITH: How many employees do you have  
15 that work for you or work in your organization?

16 THE WITNESS: 13.

17 MR. FEITH: Is that sufficient to handle all  
18 of the responsibilities that you have on your  
19 organization?

20 THE WITNESS: No, but budget constraints  
21 keeps us there.

22 MR. FEITH: How many employees do you believe  
23 you need to fulfill your mission statement?

24 THE WITNESS: I could probably handle three,  
25 four more. We have not even touched terrorism yet.

1 MR. FEITH: We have not what? I'm sorry.

2 THE WITNESS: We have not even addressed the  
3 terrorism type of disaster, which is now I believe a  
4 Federal requirement.

5 MR. FEITH: With regard to your Emergency  
6 Plan that you said that it was exercised, I think you  
7 said that you had done an emergency exercise at the  
8 airport. Was that before the accident or has that been  
9 since the accident?

10 THE WITNESS: Before the accident. It was in  
11 April.

12 MR. FEITH: Oh.

13 THE WITNESS: That --

14 MR. FEITH: What -- and you -- and if I  
15 understand you correctly, there was no exercise that  
16 had been conducted regarding an airplane accident off  
17 the airport?

18 THE WITNESS: To my knowledge, no.

19 MR. FEITH: What was at that time any kind of  
20 mutual aid agreement, what was in place for local fire  
21 department to work with the on-airport fire department  
22 during that exercise?

23 THE WITNESS: Guam Emergency Plan is the  
24 focal agency that addresses those issues, and when the  
25 -- those agencies fall under the Civil Defense plan.

1     So if there's an exercise and you -- you -- you make it  
2     realistic, then -- then Civil Defense has to step in  
3     and coordinate the resources for these exercise.

4             MR. FEITH: Have you ever had another  
5     airplane accident other than commercial transport? Any  
6     kind of airplane accident off the airport?

7             THE WITNESS: No, sir.

8             MR. FEITH: So you're -- you've never been  
9     involved with an aircraft accident of any sort?

10            THE WITNESS: No, sir.

11            MR. FEITH: Okay. Have you conducted an off-  
12     airport airplane accident exercise since the accident?

13            THE WITNESS: No, sir.

14            MR. FEITH: Is there any intention of doing  
15     so in the near future?

16            THE WITNESS: I've already stated that, sir.

17     That the Airport Authorities and Civil Defense will --  
18     will be conducting a joint exercise --

19            MR. FEITH: When?

20            THE WITNESS: -- a full-scale exercise.

21            MR. FEITH: When?

22            THE WITNESS: That has not been determined at  
23     this point.

24            MR. FEITH: Given the fact that you don't  
25     have an agreement in place, given the fact that you

1 don't have an Emergency Plan yet been adopted because,  
2 if I understand you correctly, it won't be till  
3 September 30th, if there is another airplane accident,  
4 what do you do?

5 THE WITNESS: Sir, I beg to differ with you.  
6 The Emergency Plan is in effect.

7 MR. FEITH: Is it --

8 THE WITNESS: What we're doing is just  
9 revising and updating it. And the -- the target date  
10 to update it is September 30th, and that was because  
11 that's a condition that was placed with the partnership  
12 of FEMA and -- and of Guam.

13 MR. FEITH: Can you describe for me if you  
14 had another commercial air transport accident right  
15 now, today, what would the agreement be? Who would  
16 respond? And who would be in command and how would it  
17 happen?

18 THE WITNESS: The -- the -- actually, the --  
19 the commander or the person really in charge is the  
20 governor of Guam. I draw my authority through the  
21 governor. So, the Airport Authority is a -- is in a --  
22 an agency of the Government of Guam. So, by virtue of  
23 the governor, who is the -- the person in charge of the  
24 government agency, that will come into play.

1           MR. FEITH: I'm just concerned that if we  
2 wait till September 30th, which is several months from  
3 now, for the plan to be updated, what is going to  
4 transpire --

5           THE WITNESS: I -- I --

6           MR. FEITH: -- between now and then?

7           THE WITNESS: I assure you, sir, that we --  
8 you know, given the circumstances, we're ready. Our  
9 plan works and our plan was implemented during the Paka  
10 typhoon. And I don't know if you know this, but during  
11 the Typhoon Paka all the -- the -- the resources of Gov  
12 Guam was put into play. The coordination was put into  
13 play. And we recovered. And I don't believe that  
14 anyone has ever recovered the way Gov Guam recovered.  
15 And that's because of the Emergency Plan and the  
16 direction that the governor gives.

17           MR. FEITH: And I appreciate that, and I'm  
18 sure that the citizens of Guam under those conditions  
19 appreciate that. I'm just concerned because of  
20 airplane accidents that this is not like a typhoon,  
21 it's a little unique, and given the fact that we just  
22 had an accident and the plan really never had  
23 provisions for an airplane accident I'm just concerned  
24 that if we have another one, God forbid, between now  
25 and the time it's updated that we may have a



1 coordination problem --

2 THE WITNESS: I agree with you, God forbid.  
3 But if that circumstances should happen, I believe that  
4 Guam will be able to take care of it.

5 MR. FEITH: The MOUs that you -- or the  
6 memorandums of -- I should say the mutual aid  
7 agreements and any MOUs, you said that they have all  
8 been signed and are in -- in place or in the process  
9 right now?

10 THE WITNESS: No. The MOU with the agencies  
11 have been signed off by the people that formulated it  
12 and now it's awaiting the signature of the governing  
13 authority. In this case, it's the governor of Guam and  
14 the Admiral Jansack and the colonel in Anderson and  
15 Captain Asaro of the Coast Guard. It's just now a  
16 matter of getting these four gentlemen together,  
17 sitting down, and signing the -- the agreement because  
18 it's already been put forth.

19 MR. FEITH: Okay. Again, I -- I apologize if  
20 this seems to be redundant. I'm just trying to catch  
21 up because I got a little confused. If that's the  
22 case, if it's a matter of getting these four or five  
23 people together, is there an anticipated time when this  
24 is going to be signed?

1 THE WITNESS: Yes, when I get back.

2 MR. FEITH: We would like --

3 THE WITNESS: I am coordinating it.

4 MR. FEITH: Okay. We would like to have a  
5 copy submitted to us once it is signed for the record,  
6 please.

7 THE WITNESS: You shall have one.

8 MR. FEITH: Thank you.

9 (Pause)

10 MR. FEITH: I have no further questions, Mr.  
11 Chairman.

12 CHAIRMAN FRANCIS: Mr. Cariseo?

13 MR. CARISEO: One -- one clarification,  
14 please.

15 So, if tomorrow there was an accident and you  
16 arrived on scene, would you be responsible for  
17 coordinating all the efforts of the Coast Guard, the  
18 Navy, the police, would they be reporting to you? How  
19 would that work?

20 THE WITNESS: The -- the way the MOU is set  
21 up, if there is an -- God forbid, an accident again,  
22 the first responders that go there becomes the incident  
23 commander. And it's been agreed that until proper turn  
24 to -- the transfer of the incident command, the person  
25 that responded first becomes the incident commander.

1 In this case if Gov Guam should respond to a -- to  
2 another incident, the -- the incident commander would  
3 be the fire chief at that point until such time that  
4 jurisdiction, whatever issue is -- is -- is concerned  
5 and that proper transfer of the command to that --  
6 whether it be the Coast Guard, Navy, or Air Force.

7 MR. CARISEO: So right now it's whoever gets  
8 there first?

9 THE WITNESS: That's the -- that is the --  
10 the way that's set up, yes.

11 MR. CARISEO: Back to another question. Back  
12 in April when you had this on-airport exercise, what  
13 exactly did that entail? What type of accident was  
14 that?

15 THE WITNESS: It was -- it was a -- an  
16 exercise where they had a -- a plane that was on fire -  
17 - crashed and had caught fire, and -- and the fire  
18 chief was there and was coordinating. We had a command  
19 post set up, also, about 1000 yard away. And -- and  
20 again there, we had the command post and we coordinated  
21 the resources, whatever the triage team is required to  
22 -- to be in place, whatever else is needed to -- to  
23 fight the fire or -- or -- or to transport the -- the  
24 casualties. The triage team will be able to sort out,  
25 you know, the most critical and vice versa.

1           MR. CARISEO: Was this a surprise exercise or  
2           were people given some preparation?

3           THE WITNESS: It was not a surprise. It was  
4           already planned. It was a planned exercise. The only  
5           thing we didn't know is where in the airport proper  
6           it's going -- where this thing's going to be held.

7           MR. CARISEO: Okay. Was there an evaluation  
8           done of the results of that --

9           THE WITNESS: Yes, the evaluators happen to  
10          be the Air Force personnel that was asked to evaluate  
11          this, yes.

12          MR. CARISEO: And what kind of evaluation did  
13          you receive?

14          THE WITNESS: I didn't read the evaluation  
15          after that, but I thought it went well, yes.

16          MR. CARISEO: Thank you.

17          MR. SCHLEEDE: I just had one question about  
18          the actual events involving Flight 801 and the  
19          discussion about whose property it was and all that.  
20          My question pertains to the command and control of the  
21          site and the transfer of that. From your perspective,  
22          was there -- were there difficulties because of the  
23          transfer of control to the Navy?

24          THE WITNESS: I -- I really cannot say that,  
25          sir, because I was not on the site when there was a

1 transfer. On -- in -- on the command post site there  
2 was no difficulty. Everybody was in place. In fact, I  
3 even told Admiral Jansack that even though he has  
4 assigned someone to -- to the command post, I told him  
5 that I would stay back and give him all the necessary  
6 support that he needs from the Government of Guam. And  
7 I stayed there until 3:00 that afternoon.

8 MR. SCHLEEDE: This was after the transfer to  
9 the Navy?

10 THE WITNESS: Yes. I -- I wanted to give him  
11 all the necessary resources that he -- he -- he needs.

12 MR. SCHLEEDE: During your post-accident  
13 critique, did you become aware of any difficulties that  
14 this may have caused regarding the command and control  
15 of the accident site?

16 THE WITNESS: No, sir. No, sir.

17 MR. SCHLEEDE: Thank you.

18 MR. M. MONTGOMERY: Thank you, Mr. Chairman.

19 Mr. Rosario, I am looking at the Governor's  
20 Report of Incident, which is one of the exhibits, and  
21 in the Governor's Report there is an expression that  
22 there are some questions that have been presented to  
23 the United States Air Force that have -- at the point  
24 of time of this writing had not been answered. Have  
25 you been satisfied with your -- cooperation with the

1 Air Force?

2 THE WITNESS: Yes, sir. Definitely, sir.

3 MR. M. MONTGOMERY: Okay. Thank you very  
4 much. That's all I have.

5 CHAIRMAN FRANCIS: Thank you, Mr. Rosario.  
6 You're excused.

7 THE WITNESS: Thank you, Mr. Chairman.

8 (Whereupon, the witness was excused.)

9 CHAIRMAN FRANCIS: The next witness will be  
10 Mr. Sanchez, the deputy fire chief, Guam Fire  
11 Department.  
12 Whereupon,

13 CIRIACO C. SANCHEZ  
14 was called as a witness, and first having been duly  
15 sworn, was examined and testified as follows:

16 TESTIMONY OF  
17 CIRIACO C. SANCHEZ  
18 DEPUTY FIRE CHIEF  
19 GUAM FIRE DEPARTMENT  
20 AGANA, GUAM

21 MR. SCHLEEDE: Please state your full name  
22 and business address for our record.

23 THE WITNESS: Ciriaco Sanchez. Guam Fire  
24 Department, deputy fire chief from Dedadu (ph), Guam.

1           MR. SCHLEEDE: Could you give us a brief  
2 description of your education, training, and experience  
3 that qualifies you for your current position?

4           THE WITNESS: Been in the fire service for 24  
5 years now, and during those years of service I've done  
6 courses throughout Emmitsburg, Maryland on management  
7 of fire-fighting; Denver, Colorado, advanced arson  
8 investigation; and University of Guam. Also, the Guam  
9 Community College.

10          MR. SCHLEEDE: Thank you very much, sir. Mr.  
11 Hammack will proceed.

12          MR. HAMMACK: Good afternoon, Chief.

13          THE WITNESS: Good afternoon.

14          MR. HAMMACK: As deputy fire chief, what do  
15 you duties and responsibilities?

16          THE WITNESS: Duties and responsibility --  
17 responsibilities as deputy fire chief is I've got to  
18 overall jurisdiction on the department's five various  
19 bureaus, which is the Fire Prevention, Fire  
20 Suppression, EMS Rescue, Administration, and  
21 Communication.

22          MR. HAMMACK: Thank you. Can you please  
23 describe your department's response to this aircraft  
24 accident?

1           THE WITNESS: The department's response to  
2 this accident was -- I consider it well given all the  
3 factors that we had to encounter down there -- I mean  
4 the difficulties of the site.

5           MR. HAMMACK: Well, if -- if you would take  
6 me, please, from the initial notification and sort of  
7 give me a history of -- of what happened with your fire  
8 department?

9           THE WITNESS: Okay. At approximately 2:05,  
10 August 6th, 1997, I was notified by the -- our fire  
11 dispatch that he had received a call from NES Star or  
12 Guam Airport Authority Tower that there's a possible  
13 747 aircraft down somewhere in the Nimitz Hill area.  
14 And at that point I went ahead and I asked my  
15 dispatcher if he could give me an exact location of  
16 that possibility, and they said they have no idea at  
17 this point in time the exact location of that down  
18 aircraft.

19           So, after we hung up the telephone I got my  
20 gears together and I responded to the site. And  
21 approximately 2:34 I arrived for the site, and there on  
22 the gate I met my northern commander already, which has  
23 taken command on the gate with Navy security personnel.

24           What had happened there already was that Engine #7  
25 from the Peet (ph) Fire Station had cut through the



1 chain and a padlock to open the Naval security gate.

2           So, I also was met on the site -- so I arrive  
3 -- the governor of Guam had arrived, also. And I was  
4 approached and he had asked me if -- where's this  
5 possible plane crash? And I went ahead and I told the  
6 governor that I -- at this point in time I cannot give  
7 him any exact location. However, we have to take this  
8 road and there's a possibility it might be further down  
9 the road somewhere.

10           Also, I have given instructions to my  
11 northern district commander until such time you're  
12 relieved from this gate you are to take charge, set up  
13 command post, and I do not want anyone behind -- beyond  
14 this gate without my instructions.

15           At this point we went ahead, myself, the  
16 governor, his driver, and went down the road to the  
17 site, possible crash site. And about a half a mile in  
18 from the gate we came across the Engine Company #7,  
19 Rescues #1 and 2 -- a severed pipeline. And I went  
20 ahead and got down from the vehicle and I interviewed  
21 my personnel there on the site on the road and asked  
22 them if they have located the possible down aircraft.  
23 And said, "No, sir. We were just proceeding further in  
24 to see if that's the aircraft." They had seen some  
25 flames further up the street, but they had not

1 confirmed that it was the aircraft.

2 At that point I went ahead and I gave  
3 instructions to Engine Company #7 personnel to try and  
4 remove the pipe that was blocking the road. And I had  
5 given instructions to Rescues #1 and 2 to proceed with  
6 me and to go down to find the possible crash site.

7 Right as we moved further down, about another  
8 50 yards, we were confronted by two police officer on  
9 the scene. And they had already verified that it is  
10 the down aircraft and it was located down on the what I  
11 would say a black hole, probably, 'cause it was located  
12 down real deep and there was no light whatsoever. And  
13 the only light we had during that operation -- the  
14 immediate respond operation was a flashlight and the  
15 small fires that was burning on the aircraft.

16 So, as we went down, I had Rescues #1 and 2  
17 with me and about three police officers, the governor  
18 and his driver. As we came down to the site I -- we  
19 started hearing cries for help. And --

20 (Pause)

21 THE WITNESS: You've got to excuse me  
22 sometimes because it does hit me.

23 (Pause)

24 THE WITNESS: I immediately set up a pre-  
25 triage area, one up towards the north end of the plane

1     and one in the tail end. And I went ahead and I told  
2     my men to split up, Rescue 1 and 2, to head north  
3     towards the nose end and Rescue 2 on the tail end and  
4     to be split up with the police officers that I had on  
5     hand to work with.

6             There was a total of about nine of us in the  
7     original -- initial respond. And we did what we could  
8     down there. We had no rescue equipment with us. The  
9     terrain was so bad. We went down there with  
10    flashlights, rope, that was about it, and a trauma kit.

11    And we tried to pull out the survivors the best way we  
12    could and from what we had received in fire-fighting  
13    training.

14            And from there, I took command and I also  
15    have informed the governor that, "Governor, sir, with  
16    your permission, I'd like to inform that the Rag Unit  
17    be activated."

18            And the governor had responded, "Go ahead and  
19    do what you have to do."

20            So, I contacted Fire Dispatch and I informed  
21    Fire Dispatch to activate the RAC Center. By  
22    activating the RAC Center, that also puts Mr. Rosario  
23    on board. And forever -- for whatever resource I need  
24    John would then be the man to see that it is  
25    accomplished and given to me on the site.

1           Okay. So, during all of this, I requested to  
2 Fire Dispatch to go ahead and activate a Mercy Unit is  
3 what we call them, the Naval Hospital Medical Unit,  
4 activate the Public Health Unit, GMH, Naval Hospital,  
5 and also the National Guard Medical Unit. At that  
6 point in time what I saw and what I needed was medical  
7 -- medical personnel to come down to assist on the  
8 site.

9           About 3:30 a.m. that day -- that morning, Dr.  
10 Eberly (ph) came down to the site. She's our medical  
11 director for the fire department. And she became the  
12 triage coordinator. I asked her to be the triage  
13 coordinator and to coordinate all efforts as far as  
14 helping out the injured people.

15           MR. HAMMACK: Can you tell me how your  
16 department was first notified of this accident? Do you  
17 know that?

18           THE WITNESS: Yes. According to our Fire  
19 Dispatch, they were notified by the airport tower that  
20 there was a possible down 747 aircraft somewhere.

21           MR. HAMMACK: You mentioned a pipeline  
22 blocking the road. How -- how did that piece of pipe  
23 get across the road? Do you know?

24           THE WITNESS: I --

1           MR. HAMMACK: What caused that piece of pipe  
2 to be there?

3           THE WITNESS: Well, with the evidence  
4 surrounding that area I do strongly believe that it was  
5 the aircraft.

6           MR. HAMMACK: And that -- did this prevent  
7 rescue vehicles from going past that point?

8           THE WITNESS: No, I given -- gave  
9 instructions to my rescue -- the initial responders I  
10 had control of because I was then up on the hill with  
11 them and I asked them to pull over on the side and  
12 leave your vehicle there and proceed down to the  
13 possible crash site and then start rescue operation.

14          MR. HAMMACK: They got there on foot but they  
15 could not get their vehicle past that point, is that  
16 true?

17          THE WITNESS: No, sir. At that moment, no.

18          MR. HAMMACK: No they could, no they  
19 couldn't?

20          THE WITNESS: They couldn't.

21          MR. HAMMACK: Could not?

22          THE WITNESS: Could not.

23          MR. HAMMACK: Okay. What efforts did you  
24 take to move that pipe?

1           THE WITNESS: Well, I radio informed my --  
2   chief officer in charge of the rescue operation knowing  
3   the type of vehicles he got and I asked him to proceed  
4   immediately to that area where the pipe was to go ahead  
5   and coordinate the removal of the pipe, knowing that  
6   the type of equipment he carries. His vehicle was  
7   equipped with -- lives and a K12 saw and a wench, so  
8   that would do the job.

9           MR. HAMMACK: Prior to that did you try  
10 moving it by hand?

11          THE WITNESS: We tried, yes.

12          MR. HAMMACK: And what was the result?

13          THE WITNESS: It was just too heavy. It was  
14 too great for human power to move that pipe.

15          MR. HAMMACK: About how long was it? The  
16 piece of pipe, how long?

17          THE WITNESS: The piece of pipe was between  
18 20 to 50 feet long.

19          MR. HAMMACK: Okay.

20          (Pause)

21          MR. HAMMACK: You mentioned a little bit  
22 about the conditions down there by the wreckage. Can  
23 you tell me a little more about the environmental  
24 conditions, vegetation, the ground slope, lighting, and  
25 that sort of thing? The conditions that you had to

1 work in.

2 THE WITNESS: Lighting was -- we could forget  
3 about lighting. There was none whatsoever but our  
4 flashlight.

5 The conditions, when we were down there it  
6 was raining. We were going down the slope slipping in  
7 the mud. We were faced by all types of vegetation,  
8 sword grass ranging from six to eight feet high, and it  
9 was just really rough. It's a rough terrain to go  
10 down.

11 (Pause)

12 MR. HAMMACK: Are you aware of any problems  
13 with notification of your fire department or  
14 notification of any of your units, notification to  
15 respond to this?

16 THE WITNESS: As far as notifying our units  
17 to respond there was no problem.

18 MR. HAMMACK: Was the response of any of your  
19 units delayed for any reason?

20 THE WITNESS: Yes. Engine Company #7 was  
21 delayed because back in Guam we -- we -- we do have  
22 problems with condensation build-ups on our brake lines  
23 with the apparatus, quote, "air brakes." So, that  
24 moment when the operator of that vehicle was draining  
25 the air from his line they were notified to respond.

1 And so what happened there was he had to shut the  
2 operation down and start up the engine to build up  
3 pressure again before they have to go out.

4 We might want to take note also that because  
5 of the area involved those who were in charge really  
6 did not rush to respond because of the dangerous  
7 situation with the vehicle not having brakes going up  
8 and down the hills.

9 MR. HAMMACK: Explain to me a little bit -- I  
10 need a little amplification on this bleeding of the  
11 brakes. Is it policy to have the brakes bled overnight  
12 and leave the system empty or -- or was this -- what --  
13 what was the situation here?

14 THE WITNESS: No, it's not a policy to drain  
15 and leave the system overnight. It was an unfortunate  
16 situation where when we -- the operator was -- doing  
17 this process the tragic had happened.

18 MR. HAMMACK: Once Engine Company 7 got the  
19 alarm, how long did it take to recharge the brake  
20 system?

21 THE WITNESS: Say about three to five  
22 minutes. According to our investigation reports.

23 MR. HAMMACK: How -- how do you -- I am sure  
24 you still have a condensation problem --



1 THE WITNESS: Mm-hmm.

2 MR. HAMMACK: -- because the weather is still  
3 the same, but how do you handle the breeding --  
4 bleeding of the brake system now?

5 THE WITNESS: Well, with the new policy in  
6 place the bleeding of the brake system will not be  
7 allowed unless authorized and approved by the  
8 maintenance supervisor. And if they have to do that  
9 bleeding, they have to have a backup apparatus before  
10 they even bleed the brakes.

11 MR. HAMMACK: I understand that there was a  
12 Federal Navy, I believe, fire station that was closer  
13 to the accident site than your closest station, is that  
14 true?

15 THE WITNESS: That's correct.

16 MR. HAMMACK: Do you know when they were  
17 notified?

18 THE WITNESS: The -- I might just -- may I  
19 look at my note here?

20 MR. HAMMACK: Sure.

21 (Pause)

22 MR. HAMMACK: Really, what I'm interested in,  
23 was it before or after your department was notified?

24 THE WITNESS: It was after our department was  
25 notified.

1           MR. HAMMACK: Do you know who notified them,  
2 the Federal station?

3           THE WITNESS: Yes, the Island Fire Dispatch  
4 or the Navy Fire Dispatch was notified by our Guam Fire  
5 Department dispatcher.

6           MR. HAMMACK: Can you explain to us who --  
7 what Island Fire Dispatch is?

8           THE WITNESS: The Island Fire Dispatcher is  
9 the Federal Navy fire dispatcher out in Guam.

10          MR. HAMMACK: That's separate from the Guam  
11 Fire Department dispatch?

12          THE WITNESS: That's correct.

13          MR. HAMMACK: Okay. Since this other -- the  
14 Federal fire department was closer to the accident  
15 site, do you know why they weren't notified any sooner?

16          THE WITNESS: I've got no reason whatsoever  
17 why they did not respond.

18          MR. HAMMACK: Is this one of the things  
19 you're looking into as an after-action item?

20          THE WITNESS: Yes. This is one of the things  
21 we -- we did. We met with the fire chiefs and we try  
22 to work these things out together. We -- we learn from  
23 our mistakes, and we don't want to do it again. So,  
24 for whatever the reason was we want to correct the  
25 matter.

1           MR. HAMMACK: Does it seem like you're making  
2 progress in this area as you talk to these other  
3 departments?

4           THE WITNESS: Yes. Yes.

5           MR. HAMMACK: Are you getting good  
6 cooperation from all the other departments, the Navy  
7 and Air Force and all them?

8           THE WITNESS: Yes, sir.

9           MR. HAMMACK: Any problems -- any resistance  
10 from them?

11          THE WITNESS: No. No problem. Whenever we  
12 ask for their assistance they're there. Unless they're  
13 -- for some reason they can't respond to help.

14          MR. HAMMACK: I mean in -- in planning for  
15 the next problem are you getting any resistance in the  
16 area of cooperation in the -- in the mutual aid  
17 agreement area?

18          THE WITNESS: Not on the Fire Department's  
19 standpoint. And that again will be worked on with the  
20 Guam Emergency Plan.

21          MR. HAMMACK: Okay.

22          THE WITNESS: Oh, the time that you asked,  
23 sir, excuse me. The Island Fire Dispatch was notified  
24 at 2:10 a.m., August 6th, 1997.

1           MR. HAMMACK: Can you describe for me the  
2 jurisdictional boundaries of the Guam Fire Department  
3 versus the airport versus the Navy, the Air Force, the  
4 Coast Guard if they have a fire department? Are -- are  
5 there -- are there clearly defined boundaries as far as  
6 -- when you respond to somewhere on the -- or if -- if  
7 there is an emergency somewhere on the island, does --  
8 do all the different parties know whose territory is  
9 whose and who's going to be in charge?

10           MR. HAMMACK: Yes, I want to -- I want to  
11 make it clear that the Guam Fire Department does have  
12 an MOU signing with Anderson Air Force Base. We do  
13 have an MOU signing with Coast Guard. And Navy, also.  
14 So, I would also make it -- like to make it clear that  
15 when there's any emergency, whether it be a rescue  
16 service or a medical service or -- fire, for  
17 suppression service, the Guam Fire Department has the  
18 jurisdiction over that area for the island of Guam.

19           And as far as the joint agreement with the  
20 Guam Airport Authority, we do have also a mutual  
21 agreement with them. And when the accidents and within  
22 the airport proper, we become assisting unit to them.  
23 We provide necessary resources that they request from  
24 us. And likewise, if it's outside their fence it  
25 becomes our game and they will provide also necessary

1 resource.

2 MR. HAMMACK: Okay. Thank you.

3 Can you describe the -- the scene for us when  
4 you first got to the wreckage as far as -- you already  
5 described the terrain for us. Can you describe now the  
6 airplane and basically what you saw when you got there?

7 I'm thinking about fire, number of survivors, that  
8 sort of thing.

9 THE WITNESS: Okay. When we first arrived  
10 down there, the first thing we heard were the victims  
11 yelling for help, crying because of pain. And so, we  
12 -- we tried to do everything, like I said, that we  
13 could with what equipment we had with us.

14 And as far as the airplane, it was totally  
15 engulfed when we got there. Basic -- basically, it was  
16 on its low burning stage already to the point where the  
17 fires weren't really bothering the rescuers. We were  
18 actually -- the rescue personnel were actually going  
19 into the plane checking passengers, if -- who was still  
20 alive and who was not.

21 MR. HAMMACK: And this -- this was the  
22 situation when the very first people got there, is that  
23 right?

24 THE WITNESS: Yes, sir. That's the first  
25 group of, like I said, nine -- probably nine of us.

1           MR. HAMMACK: Okay. And that was my next  
2 question. There were approximately nine of you then --

3           THE WITNESS: Yes.

4           MR. HAMMACK: -- who got there first?

5           THE WITNESS: Yes, sir.

6           MR. HAMMACK: And because of access problems  
7 the only equipment you had was what you carried in on  
8 foot, is that true?

9           THE WITNESS: That's correct.

10          MR. HAMMACK: Okay. And you -- you mentioned  
11 that you set up two different triage areas. Can you  
12 describe for us very basically what triage is and a  
13 little bit about how the triage areas operated?

14          THE WITNESS: Okay. What I did was set up a  
15 pre-triage area down on the crash site. So, we'll  
16 basically put the -- some of the injuries on the two  
17 triage -- I mean the pre-triage area that I set up.  
18 Okay. One on the tail end and one on the front --  
19 front end, which is the nose. And from there I used  
20 again what resource I had down there, manpower, and as  
21 the rescuers pulled the victims out from the wreckage I  
22 had maybe on the initial response I probably had, like,  
23 two -- person tending to the injured persons, which  
24 includes myself, the governor, and we just tried to do  
25 what we can down there without anything else.

1           The -- the triage that was set up was for  
2   medical purposes. When you set a triage area it's  
3   where you ID the injury of the victims, severity and  
4   the minor. So, what we did was I went ahead and I  
5   called one of my assistant fire chiefs also, EMS rescue  
6   chief, to set up a -- the main triage area up by the VA  
7   -- VOR area, to set up the triage area there so  
8   whatever would move from the pre-triage area would go  
9   up that way. I selected that area up there because we  
10  have ID'd that the Navy helo could actually land up  
11  there so we could start evacuating victims to the  
12  hospital.

13           MR. HAMMACK: Thank you.

14           (Pause)

15           MR. HAMMACK: Given the fact that -- well,  
16  I'm -- I'm trying to get into your -- your decision-  
17  making process a little bit, rescue versus fire-  
18  fighting.

19           THE WITNESS: Okay.

20           MR. HAMMACK: You mentioned that the fires  
21  didn't hamper access to the wreckage. Would it be fair  
22  to say that your -- your -- given all your efforts to -  
23  - to rescue and none to -- to fire-fighting at that --  
24  at -- up to this point?

1           THE WITNESS: My immediate decision was to  
2     try to save as much as I can.

3           MR. HAMMACK: I'm sorry. I missed that.

4           THE WITNESS: My immediate decision when we  
5     got down there is to try to save as much as we can  
6     without even taking suppression yet. We -- we had  
7     victims right by the wreckage area. We had victims  
8     right near the fires, so I asked my men to go over  
9     there and let's -- let's pull what we can. Also,  
10    considering the fact that there's just no way I could  
11    start suppression that fire. So, we went ahead -- they  
12    -- they went ahead, they went into that fire with not  
13    even thinking about their own safety and started  
14    pulling out victims.

15          MR. HAMMACK: Okay. And -- and for  
16    reference, there's the photograph up behind you and  
17    there's a laser pointer if -- if you need that to -- to  
18    describe anything as we go through it.

19          Mr. Rosario said you were in charge down  
20    there at the wreckage and -- and you've told us the  
21    same. Would you say that you were the commander of the  
22    rescue operations?

23          THE WITNESS: I'd say I'm the on-scene  
24    commander.



1 MR. HAMMACK: Okay.

2 (Pause)

3 MR. HAMMACK: Can you describe what  
4 communications was available to you to call in more  
5 resources or for any reason?

6 THE WITNESS: The only communication I had  
7 was my portable radio.

8 MR. HAMMACK: With that, who could you --  
9 with whom could you communicate?

10 THE WITNESS: With that I could communicate  
11 with my fire dispatchers and with the fire dispatchers  
12 they could communicate with whoever we want to talk to.

13 MR. HAMMACK: Okay.

14 THE WITNESS: And given the instructions to  
15 them, they could also relay instructions to the command  
16 post.

17 MR. HAMMACK: By the command post you mean up  
18 by the gate?

19 THE WITNESS: Yes, sir.

20 MR. HAMMACK: Okay. Did you -- down at the  
21 wreckage, did you divide responsibilities into sectors?

22 THE WITNESS: Yes, I did.

23 MR. HAMMACK: Could you communicate with the  
24 various commanders of those sectors?

1 THE WITNESS: Yes, sir.

2 MR. HAMMACK: How?

3 THE WITNESS: They all had their own portable  
4 radios.

5 MR. HAMMACK: Okay. And you --

6 THE WITNESS: That includes the rescue units.

7 MR. HAMMACK: And you had a common frequency  
8 for them?

9 THE WITNESS: Yes, sir.

10 MR. HAMMACK: Okay. And just for  
11 clarification, if you wanted to communicate with Navy  
12 or any outside agency, you did that by calling your  
13 dispatcher and they in turn relayed, is that right?

14 THE WITNESS: Yes, that was in the initial  
15 alarm, okay? But -- sometimes between three and --  
16 about 3:30 and 4:00, four a.m. that morning, I was  
17 informed by my triage officer Chief Agagi (ph) up on  
18 the -- that area right there that the admiral was  
19 there. So, it was a relief when my -- because knowing  
20 that I've got the governor on my left and I've got the  
21 admiral up on the hill I go I'm going to get my  
22 resources now.

23 MR. HAMMACK: Yeah, if they can't do it no  
24 one can.

1 (Pause)

2 MR. HAMMACK: At the time of the accident did  
3 -- did you have the ability to communicate directly  
4 with any outside agency or did you always have to go  
5 through your dispatcher?

6 THE WITNESS: Yes, I always have to go  
7 through my dispatch or the command post.

8 (Pause)

9 MR. HAMMACK: Is improvement in interagency  
10 communications going to be something you'll look at  
11 after the fact?

12 THE WITNESS: As we speak here, Gary, we're  
13 probably putting into service right now the radios that  
14 we had ordered, and that would put us into what is  
15 known as a Smart-Net unit back on the island. And --

16 MR. HAMMACK: I'm sorry. I missed that?

17 THE WITNESS: A Smart-Net unit by Motorola,  
18 and this will give us access to police, the Port  
19 Authority, the Water Works Authority, and other  
20 emergency agencies.

21 MR. HAMMACK: So, in the future an on-scene  
22 commander will have direct communications with these  
23 agencies?

24 THE WITNESS: Yes, sir.

1 MR. HAMMACK: Okay.

2 THE WITNESS: In fact, we have also issued  
3 cell phones to our district commanders already and it  
4 will greatly improve the communication.

5 MR. HAMMACK: Okay. Thank you.

6 I want to go back to when you first arrived  
7 out by the gate.

8 If we can get Exhibit 16I, pagew~~o~~ up there,  
9 please?

10 (Pause)

11 MR. HAMMACK: Just before the -- you see some  
12 police cars depicted near the severed pipeline.

13 (Pause)

14 MR. HAMMACK: Were they there when you got  
15 there?

16 THE WITNESS: No, sir.

17 MR. HAMMACK: You were already down at the  
18 site, then, when they got there?

19 THE WITNESS: Yes, sir.

20 MR. HAMMACK: Are you aware of any problem  
21 with access they might have caused?

22 THE WITNESS: I was informed by my battalion  
23 chief rescue operations officer that I mentioned  
24 earlier that I had left in charge to try to move that  
25 pipe that he was having problems with vehicles coming

1 in while they're trying to move those pipes. So, that  
2 was the only info I had from the top, but I went ahead  
3 also and instructed the Chief Mesa (ph) to do what he  
4 has to do to remove those vehicles.

5 MR. HAMMACK: Once that piece of pipe was  
6 moved, did those vehicles -- the presence of those  
7 vehicles cause any problems with access?

8 THE WITNESS: No, sir. Once the piece of  
9 pipe was removed we had traffic going through.

10 MR. HAMMACK: Can you tell me when the first  
11 ambulance arrived down by the wreckage?

12 (Pause)

13 THE WITNESS: Okay. The first medic arrived  
14 at 2:44 a.m.

15 MR. HAMMACK: Okay. Do you know when the  
16 first victim was transported?

17 (Pause)

18 THE WITNESS: -- have a time here for you,  
19 but I know that the first victim was transported by a  
20 Navy security vehicle out to the gate and so as soon as  
21 I get the time --

22 MR. HAMMACK: Okay. You can provide us with  
23 the time later.

24 THE WITNESS: Okay.

1           MR. HAMMACK: Were there ever any fire  
2 suppression efforts initiated?

3           THE WITNESS: I did have a plan on hand, and  
4 I -- as soon as I -- on my incident -- on my command  
5 section I had my public information officer with me, I  
6 had a runner with me and also set up a communication  
7 officer with me, and I had send the -- my runner up to  
8 the command post because we had lost radio contact and  
9 to tell them of the plan to -- this was after the  
10 rescue effort. We had found no more survivors.

11           The -- so I went ahead and forwarded my  
12 suppression plan to the command post. And my runner  
13 came back and to inform me that it was tabled. They  
14 had a meeting, the Air Force fire chief and the Navy  
15 fire chief and Gov Guam fire chief had -- had a  
16 meeting, and Air Force fire chief being the, I guess,  
17 the best trained for aircraft fire-fighting had told us  
18 to let the fire burn itself out.

19           MR. HAMMACK: By doing that, did it cause any  
20 --

21           THE WITNESS: No, I'd like to also clear that  
22 -- the fire we're talking about here is a piece of wing  
23 and about two tires of the plane. And this was away  
24 from the major body of the aircraft.

1 MR. HAMMACK: Okay.

2 THE WITNESS: And it did not impede recovery  
3 effort also.

4 MR. HAMMACK: Have you had a critique of your  
5 agency's activities in response to this accident?

6 THE WITNESS: Yes.

7 MR. HAMMACK: What sort of things have you  
8 learned?

9 THE WITNESS: We've learned a lot of things.  
10 One is communication problems that we had and what we  
11 have to do to improve our communication problems with  
12 various agencies and other Federal Government. Another  
13 thing was the incident command system. Although we --  
14 we are trained for that, it was noted that there --  
15 there's the need for a refresher course. That also has  
16 been done with our commanders out in the field.

17 MR. HAMMACK: And you're -- you're -- you  
18 intend to cooperate with Mr. Rosario and make this one  
19 big effort instead of individual efforts, I assume?

20 THE WITNESS: Yes, fully cooperate.

21 MR. HAMMACK: Okay. Mr. Chairman, that's all  
22 I have.

23 CHAIRMAN FRANCIS: Boeing Company?

24 MR. DARCY: We have no questions, Mr.  
25 Chairman.

1 CHAIRMAN FRANCIS: NATCA?

2 MR. MOTE: Thank you, Mr. Chairman. No  
3 questions.

4 CHAIRMAN FRANCIS: Korean Air?

5 CAPTAIN KIM: No questions.

6 CHAIRMAN FRANCIS: FAA?

7 MR. DONNER: No questions, Mr. Chairman.

8 CHAIRMAN FRANCIS: Barton?

9 MR. E. MONTGOMERY: No questions, Mr.  
10 Chairman.

11 CHAIRMAN FRANCIS: KCAB?

12 MR. LEE: Thank you, Chairman.

13 (The following is a verbatim transcript of  
14 the English translation of Mr. Lee's questions posed in  
15 Korean.)

16 MR. LEE: -- a number of difficulties. Let  
17 me express my thanks from the bottom of my heart all  
18 the efforts that you put into -- for the rescue  
19 operations.

20 Let me just check with you on two items.  
21 Guam, Air Force, and Navy and fire stations, everybody  
22 participated in the rescue operations. The -- when you  
23 look at Exhibit 16C, page eight according to FAR  
24 regulations the Guam Airport fire station did not go to  
25 that accident scene. To my understanding, the airport



1 fire station when it comes to rescue operations and  
2 fire suppression has better capabilities, better  
3 qualified to deal with aircraft accident-related  
4 situations like this compared with other more general  
5 purpose type of fire stations.

6 In the case of this accident, because of this  
7 regulation I want to ask how you feel about it, that  
8 the airport fire station was inhibited by this formal  
9 regulation from going to the accident scene and  
10 participate in the operations.

11 THE WITNESS: Well, first of all, I want to  
12 go in and clarify that. The ARF unit, Airport Rescue  
13 and -- unit from the Airport Authority did send  
14 personnel down to assist on both rescue efforts and  
15 opinions on how to help us out there to deal  
16 effectively with this type of disaster.

17 And I also want to mention that we are,  
18 although not truly capable of handling aircraft-type  
19 fire-fighting, we are basically trained to fight fires  
20 with aircraft-type. Our vehicles are equipped, not --  
21 nothing to be compared with the airport capability, but  
22 we're pretty much equipped to keep it on line until we  
23 could get any assistance from Air Force, Navy, or the  
24 airport crash crew.

1           MR. LEE: If that was the case, then among  
2 the fire engines which went to the crash site AFF foam  
3 that is used for fire suppression in relation with fire  
4 -- fire arising from accident -- airplane accident, how  
5 much of it was available at the time?

6           THE WITNESS: During this crash we had  
7 capabilities to suppress that fire. However, being  
8 that type of area, the remoteness of it with the type  
9 of vegetations, the -- where it was actually located,  
10 it was just impossible, sir, to do any fire suppression  
11 at that moment. We cannot fully activate our  
12 suppression unit and our rescue unit until we have  
13 order for the bulldozer to come down and make a road  
14 down to the crash site. Then again that took about  
15 three hours till we get a -- an opening to roll down  
16 some kind of apparatus down there or medic unit.

17           MR. LEE: Let me just ask you one more  
18 question. If you look at Exhibit 6A, page 10 among the  
19 survivors those who were sitting on 36K, the -- the  
20 helicopter pilot who was sitting on there, and he gave  
21 a testimony with respect to the survivals. Had there  
22 not been a fire there would have been about up to 50  
23 percent of survivors or more survivors. Do you think  
24 there is credibility with this testimony from one of  
25 the survivors at the time of the rescue operations?

1 Did you ever receive as to the -- receive reports as to  
2 the approximate number of survivors?

3 THE WITNESS: Yes, during the operation I was  
4 being informed at all times that -- how many have we  
5 pulled from the wreckage and how many have been  
6 evacuated from the area.

7 And as far as predicting just how many  
8 survivors we could have rescued from the accident, I --  
9 I'm not in that position to predict that, sir.

10 MR. LEE: Thank you very much. That's all.

11 (End of translation)

12 CHAIRMAN FRANCIS: Government of Guam?

13 MR. DERVISH: Yes, thank you, Mr. Chairman,  
14 and thank you, Chief Sanchez. I know it's an emotional  
15 time as it is for all of us who were there.

16 Getting back to the questions that were just  
17 posed to you, should the airport fire department  
18 dispatch its vehicles to the accident scene what would  
19 happen to the airport?

20 THE WITNESS: Sir, I know by Federal  
21 regulations that they are not allowed to leave that  
22 area.

23 MR. DERVISH: Is it not true that if they  
24 left the airport they'd have to close the airport?

1 THE WITNESS: That's affirmative.

2 MR. DERVISH: Concerning fire suppression,  
3 there were a number of recommendations made at the time  
4 at the scene, the first of which was to dump water.  
5 What would that have done?

6 THE WITNESS: I --

7 MR. DERVISH: I'm sorry. From a helicopter.

8 THE WITNESS: Okay. At that point I had  
9 informed by assistant fire chief up in the VOR area  
10 that was with the admiral to abort that mission as it  
11 would gravely endanger the rescuers once they dropped  
12 that water. So they did abort the mission.

13 MR. DERVISH: And what about the use of foam?  
14 What would have that done to the rescuers and the  
15 survivors?

16 THE WITNESS: First of all, again, I'll say  
17 it was just no way we could have bring that suppression  
18 agent down there.

19 MR. DERVISH: Very good.

20 THE WITNESS: The initial respond.

21 MR. DERVISH: Thank you. The last question I  
22 would just pose to you was the testimony of Mr. Barry  
23 Small, helicopter pilot from New Zealand. His  
24 testimony and I think which was correctly stated that  
25 the fire probably caused most of the deaths on the

1 plane, but I think Mr. Small mentioned in his statement  
2 that most of that fire occurred immediately upon impact  
3 and he also blamed oxygen from the plane for fueling  
4 the fire. How much after the time of the crash did you  
5 arrive?

6 THE WITNESS: Could you repeat that again,  
7 please?

8 MR. DERVISH: What time did you arrive at the  
9 scene?

10 THE WITNESS: At the gate or down at the  
11 accident site?

12 MR. DERVISH: Down at the plane.

13 THE WITNESS: Okay. From -- on the gate area  
14 I arrived there at 2:34 a.m. and about another 45  
15 minutes I actually arrived on the crash site.

16 MR. DERVISH: The plane crashed at 1:42, so  
17 you were there about an hour afterwards?

18 THE WITNESS: Correct.

19 MR. DERVISH: Thank you.

20 If I could go back to that map that was just  
21 up on the screen, 16I, page two? Thank you.

22 Putting that in perspective, how long is that  
23 road?

24 THE WITNESS: How long is the what?

1           MR. DERVISH: What's the distance of that  
2 road from the gate to the VOR site?

3           THE WITNESS: I'd say about three-quarters of  
4 a mile.

5           MR. DERVISH: And the conditions of that day  
6 you said were rainy. What was the condition of the  
7 road?

8           THE WITNESS: Wet. Slippery. Muddy.

9           MR. DERVISH: You also noted that there were  
10 vehicles parked on the shoulder of the road that were  
11 not blocking the road, but what was the condition of  
12 the shoulder?

13          THE WITNESS: It was just plain muddy and  
14 wet.

15          MR. DERVISH: So, in your opinion, could any  
16 vehicles have used the shoulder to drive on?

17          THE WITNESS: If they would have gone to the  
18 right side of -- they would have fallen off the cliff.  
19 If they would have gone to the left side, they would  
20 have run into the cliff. So they're trapped right  
21 there in the middle.

22          MR. DERVISH: Although this map does show the  
23 location of the vehicles and the location of the crash  
24 and the large area at the end of the road, what was the  
25 entry point into the crash site?

1           THE WITNESS: The entry point was the entry  
2 point we made by --

3           MR. DERVISH: Could you turn around and show  
4 us where you --

5           THE WITNESS: Could I what?

6           MR. DERVISH: On the map could you show us  
7 exactly where you entered the jungle?

8           THE WITNESS: Okay.

9           (Pause)

10          THE WITNESS: Okay. The entry point would be  
11 right here. This area. And on this area it's another  
12 steep -- going down towards the crash site we were  
13 talking about another 100 yards, maybe. And to reach  
14 the crash site we had to go across all types of  
15 vegetation, sword grass, all types of trees, and it was  
16 just -- it was very, very rough getting down to the  
17 crash site, especially with no light whatsoever but  
18 flashlight alone. We had to deal with all kinds of  
19 bugs down there, snakes. But with all this we went  
20 ahead and tried to go down there and rescue.

21          MR. DERVISH: You were talking about  
22 resources. I know that they were skimpy at first, but  
23 did you eventually get enough resources?

24          THE WITNESS: Yes, sir. For all the requests  
25 that I made to do the initial job, I did get the

1 resource I requested for.

2 MR. DERVISH: Considering the terrain, the  
3 weather, the darkness, and the large area that the  
4 wreckage was scattered, what kind of resources would  
5 you have needed?

6 THE WITNESS: First, I requested for  
7 lighting, and I asked command post and Fire Dispatch to  
8 see if they could also dispatch the 8C5, the Navy helo  
9 and to assist also in evacuation and lighting if  
10 possible, and we did get lights from both the helo and  
11 other agencies that responded.

12 MR. DERVISH: Concerning the helicopters, was  
13 there a problem with them hovering over the area?

14 THE WITNESS: Yes. Unfortunately, again,  
15 when the choppers arrived, they were giving me the  
16 light I needed to continue the rescue effort but,  
17 again, I had to ask them to pull away because of the --  
18 the wind coming down from the chopper's blade. That  
19 didn't help us a bit. It was just adding more fuel to  
20 the fire, oxygen to the fire, and also those small  
21 debris on the side were beginning to be lifted up by  
22 the wind from the chopper's blade.

23 MR. DERVISH: Imagine the difficulty in  
24 getting down into the crash area. How difficult would  
25 -- was it to get the survivors up from the crash area?



1           THE WITNESS: Oh, man. We could triple that  
2 amount of difficulty. We had to go back up on those  
3 slippery hills without any rappelling gear whatsoever  
4 or nothing. We were holding the victims in one arm and  
5 holding the tools in the other so we just could make it  
6 to the top. And we did this until the point until we  
7 could clear a landing site for the choppers and which  
8 we did accomplish. We did provide a landing site for  
9 the choppers down on the site besides the VOR area.

10          MR. DERVISH: Engine #7 that was stuck,  
11 according to your timeline that you have there, it was  
12 removed about 0400 to 0430, is that correct?

13          THE WITNESS: Correct.

14          MR. DERVISH: So after that it did not become  
15 a hazard or block the road?

16          THE WITNESS: No. In fact, as soon as they  
17 removed that severed pipeline the road was open.

18          MR. DERVISH: You are, of course, familiar  
19 with not only the GFD Emergency Plan but with the  
20 Territorial Emergency Plan?

21          THE WITNESS: Yes, sir.

22          MR. DERVISH: Do you think that the operation  
23 went in accordance with those plans?

24          THE WITNESS: According to those plans, yes,  
25 I'd say it did work. It did work out on this -- this --

1 - however, you know, there's room for improvement and  
2 corrections and that's being done at this time.

3 MR. DERVISH: Were you part of the April  
4 exercise at the airport?

5 THE WITNESS: Yes, sir.

6 MR. DERVISH: And your evaluation of that  
7 exercise?

8 THE WITNESS: It was a well organized  
9 exercise. It was -- it was -- I have no complaints for  
10 that exercise. And it did turn out well for --  
11 according to the Guam Airport Authority's Emergency  
12 Plan and it went right down from number one to 10  
13 without any problem.

14 MR. DERVISH: Do you have anything else you  
15 want to add about improving the reaction time and the  
16 reaction capabilities?

17 THE WITNESS: No, sir. It's just that we are  
18 making corrections at this time. We had met -- made  
19 some corrections already, and we're -- we are improving  
20 the system.

21 MR. DERVISH: That's all I have. I want to  
22 thank you for today's testimony and thank you for your  
23 work at the rescue site.

24 THE WITNESS: Thank you.

1 CHAIRMAN FRANCIS: Mr. Feith?

2 MR. FEITH: Just a couple clarifying things.

3 Early in your testimony you had referenced  
4 something called a REC Center or --

5 THE WITNESS: A RAC unit.

6 MR. FEITH: What is that?

7 THE WITNESS: That's our Response Activity  
8 Coordinators located over at the Civil Defense. When  
9 this unit is activated we've got the rep centers from  
10 various agencies that you need to actually perform what  
11 you have to perform on this type of disaster. They've  
12 got the resources that we need on the site.

13 MR. FEITH: In the fire dispatch log at 0324,  
14 and you don't need to turn to it. I'll just read it to  
15 you. It says, "Rescue 1 reported large explosion at  
16 crash site." Can you tell me what that large explosion  
17 was?

18 THE WITNESS: We had no idea what that  
19 explosion was. We were right there, and I thank God  
20 that nobody got hurt from that explosion. But it did  
21 threw two of my rescuers about 20 feet away from the  
22 site. And --

23 MR. FEITH: Was it a fire-type explosion or  
24 maybe an oxygen bottle-type explosion?

1           THE WITNESS: It sounded more like an oxygen-  
2 type explosion.

3           MR. FEITH: Anything that may have prevented  
4 that? Any -- any particular equipment that -- I mean  
5 were you aware of anything volatile in -- in the  
6 wreckage that may have caused that? Did you do any  
7 investigation afterward to find out what that may have  
8 been?

9           THE WITNESS: No, sir. We didn't do any  
10 investigation on the cause of the fire.

11          MR. FEITH: Okay. One last question. You  
12 said that when you were answering a question for Mr.  
13 Dervish about the problems that you had going into the  
14 accident site and then you tripled those problems  
15 trying to come out with victims and that kind of thing.

16          Given the nature of those problems, that is, the --  
17 the steep inclines and given that Guam does have a lot  
18 of those steep inclines in their mountainous terrain,  
19 have you or the government bought equipment now to  
20 equip your -- people for future operations like this  
21 given what you experienced on this accident?

22          THE WITNESS: Yes, we -- we do have an  
23 agreement now with other agencies that should we need  
24 to activate those agreements that we need it -- again,  
25 that falls right into our RAC unit, the Guam Emergency

1 Planning Center.

2 MR. FEITH: I think what I'm getting at is do  
3 you carry equipment now on your truck so that when  
4 you're there first on the sign -- first on the scene  
5 doing the rescue operation do you --

6 THE WITNESS: Yes, we have added on our  
7 rescue vehicles also portable generators and  
8 floodlights.

9 MR. FEITH: About -- how about for climbing,  
10 such as ropes and --

11 THE WITNESS: Yes. Well, our rescue units  
12 were --

13 MR. FEITH: -- setting up a rappelling-type  
14 --

15 THE WITNESS: Yes. They are equipped now.

16 MR. FEITH: Okay. That's all the questions I  
17 have. Thank you.

18 CHAIRMAN FRANCIS: Pat?

19 MR. CARISEO: No questions, Mr. Chairman.

20 MR. M. MONTGOMERY: No questions.

21 CHAIRMAN FRANCIS: Mr. Schleede?

22 MR. SCHLEEDE: Just a couple areas here.

23 Similar question I asked Mr. Rosario regarding the  
24 command and control of the accident site. There was a  
25 discussion and some media coverage about the switch-

1 over from the Gov Guam to the Navy. Do you -- did you  
2 encounter any difficulties? Do you think that caused  
3 any difficulties regarding the command and control  
4 because the Navy took over?

5 THE WITNESS: No, I never had problems down  
6 there on the site with the rescuers. For whatever I  
7 need I would speak directly to the admiral, and from  
8 there they'll provide me resources. And the truth is  
9 the problem was up on the top. We -- the rescuers  
10 never had problems on the bottom. The only problems we  
11 had down there was getting the right equipment to do  
12 the job, but as far as everybody working together,  
13 Navy, Federal, Air Force, crash crew from the airport,  
14 everybody was just working together, and there wasn't  
15 any problem whatsoever that I encountered with that.

16 MR. SCHLEEDE: Do you believe the outcome of  
17 the -- of the accident was changed in any way or would  
18 have been any different if Gov Guam had remained in  
19 charge?

20 THE WITNESS: It -- it -- it's beginning to  
21 head that way where there's some -- there's going to be  
22 changes.

23 MR. SCHLEEDE: I'm -- I'm sorry?

24 THE WITNESS: It's -- there's been a  
25 negotiation already for those type of changes.

1           MR. SCHLEEDE: I'm sorry. You may have --  
2 I'm -- I'm -- may have not have asked that question  
3 correctly. Regarding the outcome of the accident and  
4 the rescue, do you believe that the outcome would have  
5 been any different if there had not been a change in  
6 the command to the Navy?

7           THE WITNESS: No, I honestly believe it  
8 wouldn't be any -- there wouldn't be any changes of the  
9 -- as of this time if really there was no accident.

10          MR. SCHLEEDE: So you don't have any opinion  
11 about whether there was a problem with the switch-over  
12 to the Navy command?

13          THE WITNESS: It was -- it -- it was  
14 difficult there as far as switch-over to command  
15 because the truth is no one at that moment really had  
16 the faintest idea on whose property was this plane on.  
17 So we just went ahead and did what we had to do, and  
18 we worried about whose property later on.

19          So as far as switching command, there needs  
20 to be an improvement on that part, the switch-over of  
21 command, because it didn't quite work out the way it  
22 should be done.

23          MR. SCHLEEDE: Okay. I just wanted to touch  
24 on another area, when Mr. Dervish asked you about the  
25 airport fire-fighting equipment leaving the airport. I

1       wasn't sure how your answer went. I believe he said  
2       that the airport would have to shut down if the fire  
3       trucks left the airport? Is that your understanding?

4               THE WITNESS: Well, if for some reason the  
5       aircraft fire-fighting crew decides to have their  
6       vehicle respond to that site, there wouldn't be any  
7       fire-fighting protection for aircraft incoming or  
8       outgoing. So, that would have eventually closed the  
9       airport.

10              MR. SCHLEEDE: Okay. Eventually.

11              THE WITNESS: Yes.

12              MR. SCHLEEDE: I -- I just wanted to make  
13       sure. I think the -- Mr. Dervish in asking the  
14       question said the airport would have to close down, and  
15       I'm not sure that's correct so we'll -- we'll sort that  
16       out and look at the regulations later. I didn't want  
17       it to be implied that you said that was a fact. Thank  
18       you.

19              CHAIRMAN FRANCIS: Let me -- I -- I just want  
20       to make sure that one of Mr. Schleede's questions, his  
21       first question was do you believe that had the command  
22       not changed that would have made any difference in the  
23       prosecution in the -- in the final outcome of what  
24       happened out there on the accident site. On the issue  
25       of what's happening now or -- or the legal sort of



1 surveyors getting out there is not of concern to us  
2 right at the moment, but the issue of whether the  
3 change of command affected the outcome from your point  
4 of view is -- is an important question for us.

5 THE WITNESS: No, the chain of command -- the  
6 -- no, it didn't really affect the outcome of the  
7 accident.

8 CHAIRMAN FRANCIS: Thank you. Thank you very  
9 much for your -- for your testimony. We appreciate it.

10 THE WITNESS: Thank you.

11 (Whereupon, the witness was excused.)

12 CHAIRMAN FRANCIS: It's my intention to have  
13 -- we'll see how we do here -- but at least one more  
14 witness and perhaps try to finish with Captain  
15 Humphreys-Sprague. I'm not particularly comfortable  
16 with letting this go into tomorrow.

17 I would say to all concerned, the parties and  
18 the technical panel particularly, to try to be  
19 cognizant. We're getting a lot of questions about  
20 things that are in the record and we're getting a  
21 certain amount of redundancy, so please before you ask  
22 a question think about whether this is adding to the  
23 record. The purpose of a hearing is to add to the  
24 factual record, not to go back over things which we  
25 already have in the record.

1           So, the next witness is Joseph Mafnas, a  
2   deputy chief of police in the Guam Police Department.  
3   Whereupon,

4                       JOSEPH MAFNAS  
5   was called as a witness, and first having been duly  
6   sworn, was examined and testified as follows:

7                       TESTIMONY OF  
8                       JOSEPH MAFNAS  
9                       DEPUTY CHIEF OF POLICE  
10                      GUAM POLICE DEPARTMENT  
11                      AGANA, GUAM

12           MR. SCHLEEDE: Please state your full name  
13   and address for our business record -- for our record.

14           THE WITNESS: My name is Joseph Mafnas. I  
15   reside in Bargadais (ph), Guam.

16           MR. SCHLEEDE: And would you give us a brief  
17   summary of your experience and education that qualifies  
18   you for your present position in the police department?

19           THE WITNESS: I have 30 years of police  
20   experience with the Guam Police Department. I have a  
21   bachelor's degree in Public Administration,  
22   specialization in Law Enforcement from the University  
23   of Guam and the University of Southern California.

24           MR. SCHLEEDE: Thank you. Mr. Hammack?

1 MR. HAMMACK: Good evening, Chief.

2 THE WITNESS: Good evening.

3 MR. HAMMACK: Can you briefly describe your  
4 duties and responsibilities as deputy police chief?

5 THE WITNESS: At this time -- during this  
6 incident I was the acting chief, just for the record.  
7 And my duties and responsibility at that time is the  
8 management and control of the men and women of the Guam  
9 Police Department, also directing, coordinating, and  
10 management, all function of related law enforcement,  
11 protection of life and property, maintaining accurate  
12 law and order.

13 MR. HAMMACK: Thank you, Chief. Now, if I  
14 could, first of all, I'd like to ask you to slow down a  
15 little bit to help our interpreters.

16 THE WITNESS: Sure.

17 MR. HAMMACK: Can you please describe the  
18 police department's response activities relating to  
19 this accident?

20 THE WITNESS: During this particular time and  
21 day in question here, I got a phone call from my  
22 tactical command section that a possible down aircraft,  
23 and the time that I received the call was about 2:00 in  
24 the morning.

1           MR. HAMMACK: After you were notified of the  
2 accident, what did you do?

3           THE WITNESS: After I got the message I  
4 notified my shift leader from the tactical operation  
5 command to dispatch police officers to the scene where  
6 it's possible that the -- the aircraft went down and  
7 then to give me a feedback as to actually whether it's  
8 a down aircraft or what. About 20 minutes later I got  
9 a phone call again from my command that it is confirmed  
10 that it's aircraft crashed, and my two police officers  
11 that were assigned to the southern district was the  
12 ones that confirmed the -- the aircraft crash. They  
13 were the first one at the scene of the crime -- I mean,  
14 excuse me, of the crash.

15           And immediately after that, I -- I notified  
16 the -- the command that I should be proceeding at the  
17 scene. I didn't really know what time I arrived at the  
18 scene, but when I arrived at the scene the fire -- the  
19 other rescue -- were already at the scene. Prior to  
20 that, though, I instructed the two officers to make  
21 sure that -- notify the tactical command to contact all  
22 the responsible agencies that handle emergency crises  
23 such as this one and to take direction upon whoever is  
24 designated to be the incident commander at that time  
25 and -- and give assistance whatever is needed at that

1 point in time.

2 MR. HAMMACK: Who was in charge of police  
3 services at the site?

4 THE WITNESS: There was a sergeant. I -- I  
5 think it's Sergeant Rivu, who was the first supervisor  
6 at the scene. So at that point in time I designate him  
7 as the incident commander pending the arrival of the  
8 rescue team which at this point would be the fire or  
9 the Civil Defense, whoever comes first. So he takes  
10 control of the incident.

11 MR. HAMMACK: Were there any problems that  
12 you're aware of with cooperation among your police  
13 department and any other agencies?

14 THE WITNESS: I -- I don't have any problem  
15 with the other agencies.

16 MR. HAMMACK: Okay. Did you have any  
17 communications problems with any of the other agencies?

18 THE WITNESS: Yes, that's one of the biggest  
19 problem that we have, and that's being rectified at  
20 this point in time. The biggest problem during this  
21 incident was the communication. Although we're very  
22 close to each other we cannot communicate by radio  
23 because they're not in our net. We have our separate  
24 net from the rest of the fire and the -- and the other  
25 agencies.

1 MR. HAMMACK: That's being addressed, is it?

2 THE WITNESS: Yes. At this point in time we  
3 -- we have -- let me look at my -- let me look at my  
4 notes here.

5 Rectifying the communication problem we have  
6 purchased new equipment worth \$700,000 that will  
7 rectify all these communication problem that we can  
8 communicate with all other agencies within the  
9 Government of Guam, to include the military emergency  
10 agencies also. We also recondition some Air Force  
11 radio equipment that we will be using at this point in  
12 time as soon as it's completed reconditioning. And  
13 Chief Sanchez mentioned about the Smart-Net. We will  
14 be having a new repeater side up and with additional  
15 channel that would accommodate both the other agencies  
16 for -- for this particular whatever emergency that do  
17 come. And -- and one of the forthcoming is the  
18 building of a three-story building that will compose of  
19 all communications center of all Government of Guam.

20 And also, I'd just like to mention that the  
21 governor has ordered a 911 system task force to come up  
22 with this building of the communications center for all  
23 Government of Guam agencies to be actually -- I mean to  
24 be in that one general location.

1           MR. HAMMACK: Thank you. One more item. I  
2 want to get back to those police cars that were parked  
3 up by the severed pipe. I'm -- I'm still unclear about  
4 what, if any, problem, they may have caused with  
5 vehicular access to the -- to the wreckage. Can you  
6 address that?

7           THE WITNESS: When my officers first arrived  
8 for the scene, they -- the -- there wasn't any problem  
9 other than it was muddy and it was rough getting inside  
10 to -- to the site. And like what Chief Sanchez  
11 mentioned, even the shoulder is -- is too rough to  
12 travel. It's just enough for a vehicle to move around  
13 the pipe that was bent towards the main road. So in  
14 other word, the two vehicle would have passed that pipe  
15 that was broken by the airline with just barely enough  
16 room to move towards the other side, which is the VOR  
17 side.

18           But the place was -- was really in bad  
19 condition. It's like a clay -- if you want to compare  
20 it, you know. When -- when the clay gets that muddy  
21 and always slippery and -- and everything else.

22           MR. HAMMACK: My question is, I guess, once  
23 that piece of pipe was moved and those cars remained,  
24 was there any problem with getting vehicles into that  
25 --

1           THE WITNESS: There is no problem when the  
2 pipe was removed or bent inward. There wasn't any  
3 problem for a vehicle to move in and out to one point  
4 to another point.

5           MR. HAMMACK: Would you classify that road as  
6 a one-lane road, two-lane road?

7           THE WITNESS: I would classify it as a ~~on~~  
8 lane road. Heavy equipment that goes in there, that's  
9 the only equipment that can go in there. There is no  
10 other vehicle that can go on either side because of the  
11 embankment of both sides.

12          MR. HAMMACK: Mr. Chairman, that's all the  
13 questions I have.

14          CHAIRMAN FRANCIS: Korean Air?

15          CAPTAIN KIM: No questions.

16          CHAIRMAN FRANCIS: Barton?

17          MR. E. MONTGOMERY: No questions, Mr.  
18 Chairman.

19          CHAIRMAN FRANCIS: Boeing Company?

20          MR. DARCY: No questions, Mr. Chairman.

21          CHAIRMAN FRANCIS: KCAB?

22          MR. LEE: No questions.

23          CHAIRMAN FRANCIS: NATCA?

24          MR. MOTE: Thank you, Mr. Chairman. No  
25 questions.



1 CHAIRMAN FRANCIS: FAA?

2 MR. DONNER: No questions, sir.

3 CHAIRMAN FRANCIS: Government of Guam?

4 MR. DERVISH: Thank you. No questions.

5 CHAIRMAN FRANCIS: Mr. Feith?

6 (No response)

7 CHAIRMAN FRANCIS: Mr. Cariseo?

8 (No response)

9 CHAIRMAN FRANCIS: All right. Thank you very  
10 much for your testimony.

11 THE WITNESS: Thank you.

12 (Whereupon, the witness was excused.)

13 CHAIRMAN FRANCIS: I would like to take a 10-  
14 minute break. It is now 6:49. We will reconvene in 11  
15 minutes here for the Navy testimony. You've got the  
16 time on the clock, Mr. Feith? You can -- you can set  
17 your watch by my watch for the next two days. After  
18 that you can set it back.

19 (Whereupon, a brief recess was taken.)

20 CHAIRMAN FRANCIS: We're going to have -- if  
21 we could sit down, Mr. Donner. Trying to get  
22 recognition? You haven't been saying much recently.

23 (Pause)

24 CHAIRMAN FRANCIS: All right. Our next  
25 witness is Captain Mary Humphreys-Sprague. She's

1 currently the inspector general of the U.S. Navy,  
2 Southern Command.

3 Whereupon,

4 MARY HUMPHREYS-SPRAGUE  
5 was called as a witness, and first having been duly  
6 sworn, was examined and testified as follows:

7 TESTIMONY OF  
8 CAPTAIN MARY HUMPHREYS-SPRAGUE  
9 INSPECTOR GENERAL  
10 U.S. NAVY  
11 SOUTHERN COMMAND  
12 MIAMI, FLORIDA

13 CHAIRMAN FRANCIS: And you've sworn her in?

14 MR. SCHLEEDE: Yes, she's been sworn. I just  
15 want to ask a few questions about your -- please give  
16 us a description of your education, training, and  
17 experience that qualifies you for the position that you  
18 held at Guam at the time of the accident?

19 THE WITNESS: Well, I have 28 years of  
20 experience with the Navy. And I also have all the  
21 leadership tours that lead up to that. I've had  
22 command several times. And I've also had the last 10  
23 years of experience I've had in humanitarian assistance  
24 and disaster relief. And the chief of staff position,  
25 I've occupied the chief of staff position there, and it

1 basically was chief of staff of all the Naval forces on  
2 Marianas.

3 MR. SCHLEEDE: Thank you. Mr. Hammack, and  
4 we might need to speak a little slower.

5 MR. HAMMACK: Good evening, Captain Sprague.  
6 Thank you for being with us.

7 At the time of this accident where were you  
8 stationed?

9 THE WITNESS: I was stationed at Clannard  
10 Naval Forces, Marianas. I was the chief of staff  
11 there. I was also functioning in this event as the  
12 DCO, which is the Defense Coordinating Officer. The  
13 main role of the DCO is to work with civilian  
14 authorities in responding to crises there, and we had  
15 responded to quite a few typhoons and earthquakes,  
16 fire-fighting, and such. And one small aircraft  
17 accident earlier in the year. A Cessna had gone into a  
18 swamp.

19 MR. HAMMACK: Thank you. Can you please  
20 describe your experiences and observations regarding  
21 the response to this accident?

22 THE WITNESS: Well, my first contact with the  
23 crash was when my husband Jay Sprague was called. He  
24 was the executive manager of the Guam International  
25 Airport Authority, and he received a call from Airport

1 Ramp Control at 2:16 in the morning, and the subject  
2 was that a 747 Korean Airliner was missing over -- over  
3 the Nimitz Hill area.

4 Since the crash hadn't been confirmed at that  
5 time he asked the people to call the Guam Fire  
6 Department, okay, to see if they knew where the crash  
7 might be at.

8 We also lived on Nimitz Hill, and what I did  
9 was I went outside and walked around the house to see  
10 if I could see any signs of the crash. And in the back  
11 of the house if you looked off to the southeast you  
12 could see a -- a bright orange glow in the sky. It was  
13 very dark out and the -- and the glow lit up almost  
14 like a sunset. And it took up a substantial portion of  
15 the sky, probably because of the clouds.

16 I then went into the house and I called our  
17 Navy Security Office and I called my command duty  
18 officer. And I asked the command duty officer to  
19 activate our first responders, our search and rescue  
20 assets, and the auxiliary security force, and by that I  
21 mean our fire, our security, our helos, and our  
22 hospital mass casualty forces.

23 At about that same time after I hung up Jay  
24 received a call saying that the crash had happened on  
25 Nimitz Hill, and he went to the airport. That call was

1     about 2:26 in the morning.

2             On his way to the airport he did locate the  
3     crash site. As he was going down Sprewins -- Sprewins  
4     (ph) Road to Marine Boulevard, he could see the crash  
5     below Building 200, which was the ComNav Marianas  
6     Headquarters at that time. And it was a large fire, he  
7     said, that covered a substantial part of the valley.

8             Immediately after receiving that call I  
9     called the commanding officer at the Naval Hospital to  
10    discuss a strategy for a medical response. The  
11    hospital always assists in mass casualty situations on  
12    the island. There are two hospitals on the island, and  
13    we help whenever we can.

14            The CO's line was busy, so I contacted the  
15    officer of the day and asked him to start the mass  
16    casualty response system and activate the EMTs, and he  
17    did do that. And the EMTs were sent out of the Naval  
18    Hospital at 0240 in Mercy 1 up the hill to the accident  
19    scene.

20            MR. HAMMACK: Excuse me. What is Mercy 1?

21            THE WITNESS: Mercy 1 is the -- one of the  
22    ambulances that's stationed at the Naval Hospital.  
23    They're all labeled. Ours are all Mercys.

24            Okay. At the same time that I was speaking  
25    to the hospital I could hear some of the sirens on

1     Sprewins Road from some of the emergency vehicles going  
2     towards the crash site. I couldn't tell you whether  
3     they were ambulances or fire engines, but they were  
4     emergency sirens.

5             At around 2:40 my command duty officer called  
6     back saying he had made all the appropriate  
7     notifications to the Navy's first responder. I then  
8     called Admiral Jansack at his house and told him we had  
9     a 747 down on Nimitz Hill.

10            He thought this was the exercise that we were  
11     going to be doing that day. We had a planned exercise,  
12     a no-notice exercise for a plane -- off-site plane  
13     crash and a explosion in a oil -- above-ground oil  
14     container that was -- and -- and also we were going to  
15     practice some -- some environmental work and response  
16     to a off-site crash. It was going to be a military  
17     plane off-site crash at 10:00 that morning. So he  
18     thought I was calling him on that, and I assured him I  
19     wasn't.

20            So, he proceeded over to the crash site, and  
21     I went down to the headquarters to coordinate the  
22     response from the Navy side.

23            When I got down there, which was around 3:00,  
24     the CDO briefed me on the situation on the hill and he  
25     also asked me if we needed volunteers. And I did say

1     yes to the volunteers, and I asked him to have them all  
2     go to the Naval Hospital because I didn't want too many  
3     people responding on the hill because we had notified  
4     every command by that time for response for the  
5     auxiliary security force so we knew that the word was  
6     getting out.

7             I also asked him for a brief on what was  
8     happening on the hill because the admiral was there on  
9     the hill at the VOR site, and he told me that there  
10    were -- 25 to 30 survivors at the crash site; the  
11    conditions at the crash site was that it was in a  
12    isolated valley, in the Fonte Valley; the area was  
13    covered with a light jungle canopy, which means it's  
14    tall sword grass, sword brush, small trees; and they  
15    had very steep hills and a rugged terrain leading down  
16    to the crash site. It was really dark and extremely  
17    muddy, and there was a light rain falling.

18            Okay. He also said there was quite a bit of  
19    smoke and that some small fires continued to burn in  
20    the main cabin and around the wings. The only route  
21    into the valley was the narrow road that leads to the  
22    VOR site. We also used it maintain the pipeline that  
23    was running along through the Fonte Valley.

24            The VOR and pipeline access road didn't go  
25    all the way to the crash site. They went alongside, so

1     you had to go down hills that were 45 to 65 degree  
2     inclines, depending on where you were on the hill. It  
3     looks in general about a 45-degree, but there were  
4     hills that jutted out and then there were 65-degree  
5     angles down into the crash site.

6             The VOR site, as you saw in I think it's 16I,  
7     page number five, was above the crash site, and that  
8     was where they made the first entries from.

9             I was also told at that point that the plane  
10    had broken into four parts and they were -- they  
11    couldn't see where everything was in the site because  
12    it was across a little bit of an area but the tall  
13    sword grass kept their vision low and it was really  
14    dark.

15            I was kind of concerned about the rescue  
16    workers that we were sending up there because in  
17    previous accidents of this sort I knew there'd be a lot  
18    of jagged metal, broken glass, and some potential  
19    health and safety hazards to our workers.

20            MR. HAMMACK: Captain Sprague, excuse me.  
21    That exhibit you referred to is on the screen behind  
22    you --

23            THE WITNESS: Okay.

24            MR. HAMMACK: -- if you need it.



1 THE WITNESS: Yeah, let me show you where --  
2 the first --

3 MR. HAMMACK: Can you bring that microphone  
4 around with you, please?

5 THE WITNESS: Okay. The first entry point  
6 was from here down to the site, and this was not --  
7 this was a build-in later. So they did come back to  
8 this entry point and try to come in this way, which was  
9 less steep, but it was still a 45-degree angle. It's  
10 also about 750 feet, 700, 800 feet from this road to  
11 the site and from this angle almost 1000 feet.

12 They were telling me on the phone when I was  
13 talking to them that they were basically sliding down  
14 the hill on their buttocks and they were falling into  
15 holes along the way that were filled with water and  
16 sometimes they were sinking up to their knees in the  
17 mud. It was so muddy and so messy there.

18 About that time I tried to call down to the  
19 Civil Defense bunker and tried to see what kind of  
20 assets Civil Defense would need but nobody answered yet  
21 at the Civil Defense bunker at that time. It was  
22 around 3:00.

23 At 3:30 -- well, I take that back. At 3:05  
24 the admiral called and confirmed the situation on the  
25 hill.

1           At 3:30 he called me back and he was  
2   requesting helicopter support. The helicopters were  
3   already en route to the site, but I expressed some  
4   concern to him about them having the landing site in  
5   the area. And he said, "Well, we'll put 'em at the VOR  
6   landing site. We'll land 'em in that concrete area at  
7   the top of the hill there."

8           But my concern was also how were we going to  
9   get the people out, and I think the chief talked about  
10   that before, trying to bring 'em up the hill. They  
11   strung some ropes and stuff and tried to hoist them  
12   out, and that wasn't working and it was taking way too  
13   long, so they eventually cleared a landing site that  
14   the helicopter could land in.

15          They also --it was extremely dark when they  
16   first started this maneuver. Helicopter pilots were  
17   wearing night vision goggles but the sword grass was  
18   swaying back and forth and they couldn't really tell  
19   from the depth of the grass how far it was to the -- to  
20   the ground, so they hovered quite off, and it was  
21   causing a lot of the smoke and stuff to move around on  
22   the site.

23          We were trying to get ambulances to the site,  
24   and he had requested ambulance and lighting. I called  
25   the Navy OOD around 3:35, and they said -- I asked 'em

1 to send an ambulance bus up. And about 15 minutes  
2 later I checked on the bus and it hadn't gotten there  
3 yet, so we tried to figure out what was wrong. And we  
4 called down to the dispatch center at the hospital, and  
5 they told us they couldn't get past a pipeline that had  
6 been dragged across the road and that there was also  
7 congestion in that area.

8 But the real problem was that the road is so  
9 narrow. It's 10 feet wide and each shoulder was around  
10 seven to seven and a half feet wide, and they were  
11 pretty muddy. And so, if I can show you on 16I, page  
12 two, I think it is, the one where we have the pipeline.

13 (Pause)

14 THE WITNESS: The pipeline came across here.

15 Actually, the break measured about 21 feet, and so if  
16 you consider seven feet on that side and 10 foot, and  
17 then it still came across into that extra muddy  
18 shoulder -- shoulder on this side. There was a lot of  
19 congestion here, but these cars were parked along the  
20 edge from what I understand and they may have had,  
21 maybe, one wheel on the pavement. But they were pulled  
22 off to the side. It -- a small car had pulled up next  
23 to the fire engine to try to help maneuver the fire  
24 engine, which when it tried to pass over this way,  
25 that's Fire Engine #7, got stuck in its -- up to its

1 axles in mud. So, effectively there was no getting by  
2 there except for get out of your vehicle and walk up  
3 the hill.

4 Now, eventually we sent a dozer up. Let me  
5 get the times.

6 (Pause)

7 THE WITNESS: I was -- I was told that the  
8 dozer was en route around 4:10, and the dozer got in.  
9 And there wasn't any problem getting to the pipeline  
10 and helped with the -- with the other people who were  
11 trying to do that, to move the pipeline. They told me  
12 that the pipeline had been secured at 4:47, and there  
13 was no impediment to traffic after that time.

14 Let me go back a little bit. We weren't able  
15 to reach Mr. Rosario for this whole time so we were  
16 just sending assets that we thought he might need at  
17 the site, which was basically fire security, helos, and  
18 medical care. He also -- we knew he would be or  
19 somebody would be at the controlling entrance into the  
20 site and they would only take the types of emergency  
21 care that they wanted because we always function in an  
22 assistant role to the civil authorities. We -- even  
23 though there was some discussion about us taking over,  
24 our role is to assist the civil authorities.

1           Anyway, around 3:15 we talked to the command  
2 center at Anderson and they were sending down their  
3 fire chief to the accident site, and he was going to  
4 try to bring some phone capability with him. But it  
5 still seemed like it was going to be pretty tough  
6 because there was no access into that crash site, and  
7 what access we had was through steep inclines.

8           Communications was a little tough, but it was  
9 -- it was easily workable if you knew how to call the  
10 dispatcher and ask the dispatcher to talk to the person  
11 in the emergency vehicle or the -- another person on  
12 the radio to figure out what's -- what was going on.  
13 The problem is that our dispatchers -- I could talk to  
14 the Navy dispatchers but I couldn't talk at all times  
15 to the -- the Guam dispatchers. But our dispatchers  
16 were feeding back information from the hill from our  
17 people, and I was also receiving calls from Admiral  
18 Jansack and another person, Commander Laner.

19           When this pipeline broke, it spilled about  
20 1000 gallons of crude oil, and so we were also  
21 concerned about the environmental and the Fonte River.

22       And -- and there was also fuel spilling from the  
23 plane, and so we were concerned about that 'cause it  
24 was basically covering fuel over the entire site. And  
25 I was concerned about our rescue workers and the

1 possibility of the fire catching there since that was  
2 jet fuel. We were real lucky that didn't happen.  
3 There were some small fires. I got a call about a -- a  
4 explosion that made a lot of people nervous, but then  
5 they called me back and said nothing -- nobody was  
6 injured, it just shook up a bunch of people but they  
7 were working.

8           Then around 7:00 Admiral Jansack called and  
9 said that they had found the black boxes and he gave  
10 'em to the ATF person and they were sent off.

11           We took out 19 people by helicopter, and the  
12 rest went out by ambulance from the site. And the last  
13 survivors were taken from the aircraft at 7:20. They  
14 were in the tail section, and they were lifted out of  
15 the crash site by helicopter at 7:42.

16           The first helicopters arrived at the hospital  
17 around 5:00 in the morning at the Naval Hospital, and  
18 the final two survivors arrived there just before 8:00  
19 at the Naval Hospital.

20           We -- we did continue to search 'cause we  
21 took the auxiliary security force and asked them to do  
22 a grid search of the area to make sure that none of the  
23 survivors had wandered off or gone into the -- or  
24 fallen in the valley or anything. We also had EOD and  
25 SEALs working on stopping the environmental

1     contamination to the Fonte River, and they were using  
2     rappelling ropes to put down oil blooms but they were  
3     also looking to see if any survivors had wandered over  
4     the side of the hill or anything so that we could make  
5     sure that we had everybody.

6             We continued that grid search until about  
7     16:45 in the afternoon of the 6th, and we found no  
8     survivors after the 7:20 survivors were found in the  
9     tail.

10            MR. HAMMACK: Thank you.

11            THE WITNESS: Okay.

12            MR. HAMMACK: But you're -- you're no longer  
13     at Guam. Everybody's mentioned some communications  
14     problem. Is it your understanding as well that they're  
15     being taken care of on the Navy's side?

16            THE WITNESS: Actually, before I left we had  
17     talked to the Air Force about using a 400 megahertz  
18     capability because they had not used their full  
19     capability but helping us work out an emergency  
20     communications system on the island between the  
21     Government of Guam and the Federal agencies so that we  
22     could all talk in these types of emergencies.

23            And I believe that the Air Force -- as a  
24     matter of fact, before I left the Air Force gave us a  
25     commitment that they would let us use that excess

1 capacity. I don't know if the Navy's bought the equip  
2 -- proper equipment yet. I know that we had asked for  
3 a study to be done before I left and to get the right  
4 kind of equipment so that we could talk with Guam on  
5 the same channels in these -- in these situations.

6 MR. HAMMACK: One more item for  
7 clarification, and I'd like to hear it from you because  
8 you're sort of an independent voice. I've heard  
9 discussion that those police cars you referred to out  
10 by the severed pipeline caused some sort of access  
11 problem. Am I correct in understanding you that once -  
12 - even with those cars there, once that pipeline was  
13 moved access was not a problem at that point?

14 THE WITNESS: When the pipeline was moved and  
15 secured to the side, which was around 4:45, the access  
16 was wide open. There was not -- there was not an  
17 issue. The congestion prior to that -- prior to the  
18 being -- pipeline being removed was caused by the  
19 pipeline being completely across the road.

20 MR. HAMMACK: Mr. Chairman, that's all I  
21 have.

22 CHAIRMAN FRANCIS: KCAB?

23 MR. LEE: No questions. Thank you.

24 CHAIRMAN FRANCIS: Barton?



1 MR. E. MONTGOMERY: No questions, Mr.  
2 Chairman.  
3 CHAIRMAN FRANCIS: Boeing Company?  
4 MR. DARCY: No questions, Mr. Chairman.  
5 CHAIRMAN FRANCIS: Korean Air?  
6 CAPTAIN KIM: No questions.  
7 CHAIRMAN FRANCIS: NATCA?  
8 MR. MOTE: No questions, Mr. Chairman. Thank  
9 you.  
10 CHAIRMAN FRANCIS: Government of Guam?  
11 MR. DERVISH: Thank you. No questions, Mr.  
12 Chairman.  
13 CHAIRMAN FRANCIS: Mr. Donner?  
14 MR. DONNER: No questions, sir. Thank you.  
15 CHAIRMAN FRANCIS: Mr. Feith?  
16 MR. FEITH: No questions, sir.  
17 MR. SCHLEEDE: Yes, Captain SpragueI just  
18 wanted to ask a similar question to a -- that I had  
19 asked of the other witnesses regarding the search and  
20 rescue, and that has to do with the issue of command  
21 and control transfer from the Gov Guam to the Navy and  
22 whether, from your perspective, that created a problem  
23 or any -- affected the outcome of the overall disaster  
24 response?

1           THE WITNESS: It did not affect the outcome  
2 of the overall disaster response. As a matter of fact,  
3 the admiral was working with the people at the crash  
4 site. He was at the VOR site and he was working with  
5 the people at the actual crash site and trying to  
6 convey the -- via cell phone to the Navy side what  
7 assets were needed on the hill. So there was an  
8 integral mix before the change of command on the hill,  
9 and he called me about 8:04 and said that -- that they  
10 were going to start the process of turnover, and I  
11 don't think they finalized that process till about  
12 11:00. But the last survivor had already been found  
13 and transported before that took effect.

14           MR. SCHLEEDE: This issue of change of  
15 control, was that addressed in your after-action report  
16 as something that needed to be improved?

17           THE WITNESS: Well, yes, sir. There was some  
18 -- probably some misunderstandings at the time, but  
19 military can never be in command of an -- of a civilian  
20 accident site unless the site has already been turned  
21 over to the NTSB and we're augmenting and supporting  
22 the NTSB. So in all practicality the civilians have  
23 command and control of the site and we assist them, and  
24 then when the NTSB comes to the site then we assist the  
25 NTSB. And the only time we would be in command and

1 control of -- of the military would be if it was on a  
2 military air space.

3 MR. SCHLEEDE: Thank you very much.

4 THE WITNESS: Okay.

5 CHAIRMAN FRANCIS: Thank you very much for  
6 coming from your new job. I hope that wasn't an  
7 inconvenience or --

8 THE WITNESS: No, sir --

9 CHAIRMAN FRANCIS: -- hardship for you to  
10 have to come to Hawaii, but we -- we appreciate your  
11 contribution.

12 THE WITNESS: Yes, sir.

13 CHAIRMAN FRANCIS: Well, thank you very much.

14 (Whereupon, the witness was excused.)

15 CHAIRMAN FRANCIS: All right. We'll -- we'll  
16 reconvene tomorrow morning at 8:00. 8:00. By Mr.  
17 Feith's watch that will be 7:58.

18 (Whereupon, the proceedings were adjourned,  
19 to reconvene at 8:00 a.m., Thursday, March 26, 1998.)